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The Journal of the Fire Protection Profession

NOVEMBER 11, 1931

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● It has been estimated that seventy per cent of the factories and other industrial establishments destroyed by fire in times like these are never rebuilt. Yet we find, strangely enough, that many cities doing good work otherwise in unemployment relief, have completely overlooked the importance of properly safeguarding against fire the industries that are keeping men at work.

● Under these conditions, a city has everything to lose and nothing to gain by delaying the purchase of needed fire equipment. Why wait for a conflagration to come along to prove it?

The Publishers

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CITY CLERK AND TREASURER

September 21, 1931.

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Yours very truly,

A. Cooper

A. Cooper
CHAIRMAN OF FIRE COM.

STATESVILLE, N. C., offers another fine example of what adequate fire alarm box distribution will do for a fire department. Three years ago when that city installed its first fire alarm system, the officials decided that if they were to receive the full benefit from their investment, an adequate number of fire alarm boxes would have to be installed.

Accordingly, it was decided to install a box on every block so that a person discovering a fire would know instantly that a box could be found on the nearest street corner. One hundred Gamewell boxes of the Peerless non-interfering and succession type were distributed throughout this city of 10,491 population. Now that the system has been installed long enough to judge its value, Chairman of the Fire Committee, Mr. A. Cooper, states that city has received 96% of its alarms through the fire alarm boxes during a twelve months' period, and although definite statistics are not available, there has been a noticeable decrease in fire losses.

Examine the fire alarm records of your own city. If the percentage of box alarms is low, it is an indication that you have not a sufficient number of fire alarm boxes. Additional boxes should be installed until you have "A Box A Block" distribution, then as your city grows, a definite number of new boxes should be installed each year to maintain an adequate box distribution. Without that, you cannot maintain a high percentage of box alarms—the safe alarms.

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The Journal of the Fire Protection Profession

VOLUME LXXXIV NOVEMBER 11, 1931 NUMBER 23

Training Volunteer Firemen

Members of the Department Should Be Proficient in Hose and Ladder Work and in First Aid Training—Methods to Follow

By M. M. TAWNEY,
Chief of Fire Department, Harrisburg, Pa.

THERE has never been a time in history of our nation when the demand for trained men has been so great as it is today. The fire service is by no means an exception.

We are living in an age when the haphazzard, slip-shod way of doing things can no longer be given any consideration, let alone be approved.

Chief M. M. Tawney

Just a word in regard to the fire waste of our nation to show the importance of having trained men to battle the worst enemy on the American continent—Fire.

A total of 10,000 lives, 30,000 persons injured and the loss of over $500,000,000 annually, a per capita loss of $4.07 for each man, woman and child in the United States, is in my opinion sufficient reason for immediate action in some constructive program to eliminate this condition or at least remedy it so far as possible.

Now let us see what can be done in our line of work. There is not a more noble and braver body of men in the universe than those in the Fire Service.

But it is necessary to educate our firemen.

You are always confronted with the statement "You cannot have a Fire School and train men in a Volunteer Fire Department." This is absolutely untrue. Operating a Fire School in a city of more than 80,000 population with a Volunteer Department is some task, but it can and has been done.

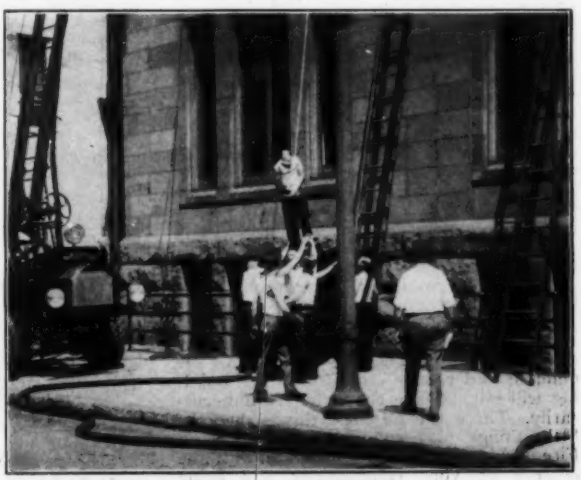
There are those who bitterly assailed the movement for a training School in our department in Harrisburg, but there is another group of progressive men who are firemen because they love the work and are interested in doing things for their fellow-man and the community in which they live. It is this group that makes the sacrifice to obtain the fire fighting knowledge, and this class will support a school of instruction wherever it may be started. Such men are a great asset to the fire service of the community from which they come.

While our school is not as complete as the schools of larger cities, we are striving to give our men the best we can under the circumstances and our efforts have been rewarded by seeing 51 men graduate from our course. Any persons who have been privileged to witness the demonstrations given by either the class of 1930 or 1931 can testify whether the work has been worth while, and the accomplishments beyond all expectations.

The course covers a period of sixty nights, three to four hours each evening. Meetings are held two evenings each week. At the start of each class we had approximately sixty men, but we lost quite a few who secured other employment. At the close of the course we had twenty-seven and twenty-four, respectively. You must remember these men are volunteer firemen and when they are compelled to discontinue the course on account of other employment we must submit to the loss. There are very few who discontinue the course of training, once they become interested.

Harrisburg has been very fortunate in having a man graduate from the Philadelphia Fire School. So far as possible, the training he received is followed in the instructions given in the school.

The first thing that confronts you in starting the school is the choosing of the men. In a volunteer department this can only be done by the process of elimination. The school must be open to all and the men eliminate themselves if they are not interested. Sometimes the volunteer is not physically fit to stand the test. This soon makes itself apparent because of the physical exercises used to put the student in proper condition. Eleven evolutions will loosen the joints and harden the muscles to make men fit for service.

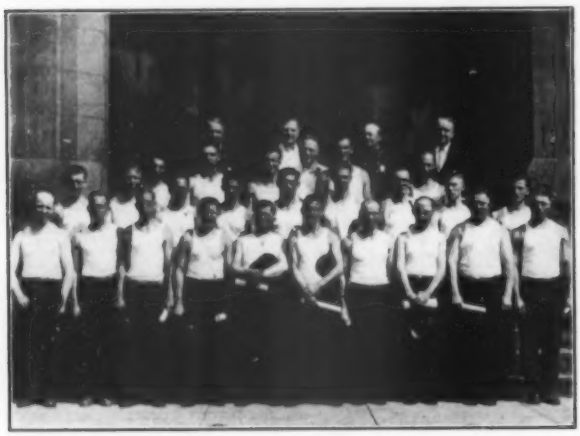


Lowering a Fellow Student at the Harrisburg Fire School

Knot tying, hose and ladder evolutions, tools and their uses, and first aid are the important subjects which are emphasized and on which the applicant is required to make a satisfactory mark in an examination.

Every Fire Department, regardless of how small, can take up these branches of the work, and the result will be amazing. They will show conclusively that there is a right and wrong way to do things, and a hard and easy way to perform the duties of a fireman.

One of the most important subjects "Tools and Their Uses" must be given special consideration. What is more



These Volunteer Firemen Have Completed the Prescribed Department Course

Certificates are awarded to the firemen who have satisfactorily demonstrated the training they have received. Chief Tawney is in the last row to the left.

destructive than an axe or other tool in the hands of some person not familiar with the proper uses of same? With plenty of time for this part of the program, the men will more efficiently perform the duties entrusted to them and they will be a credit to the Fire Department. The real fireman is anxious to learn all he can in this important work.

The school, in order to be a success, must be interesting both from an educational and social standpoint. The men must have a variety from time to time, in order that the work does not become tiresome. We have authorities from different cities who come to lecture on the subjects which we are unable to teach. The use of gas masks, sprinkler systems, standpipe systems, mechanical refrigeration and ventilation have been the subjects of very interesting lectures which have aroused especial interest among the men.

Another all important subject to which I wish to call your attention, is the work of Salvage Operations. This can only be touched upon by our department for the reason we are unable at this time to have a Salvage Corps. We realize that seventy-five per cent of fire losses are traceable to water damages incident to the extinguishment of fires and for this reason the men are instructed in the handling of salvage covers, gaining entrance to buildings involved in fire, and the use of small water lines. These three items on Salvage Operations are very important and while most departments may not be able to support Salvage Corps, they can make use of the three items mentioned to a very good advantage. The result will be very noticeable in your fire losses.

For example: Salvage Covers will protect the furniture from water damage, small water lines will not flood the building and proper entrance to the building will not damage the structure unnecessarily. These are all little things, but the little things plus common sense will put Fire Departments in good repute with the citizens of your communities and bring about the results we are striving to attain.

Ventilation and its proper application of same is another subject which has been found very helpful in our school work. It is very interesting to the men and extremely helpful in fighting fires. It is indispensable. If properly applied it will safeguard the men and make their work less hazardous. Fighting fires in tall buildings, cellars, warehouses and fires of special nature are given a great deal of consideration and study. It has also proven of inestimable value in the school.

There are many subjects to be given consideration in the education of firemen. It is best for every Fire Chief to become affiliated with the International Fire Chiefs Association and to communicate with their headquarters in New York City where information for teaching in any fire department may be received. A few of the subjects covered in the pamphlets issued by the Educational Committee are as follows: Fire Department Tools and Their Uses, Forcible Entry, Auxiliary Fire Fighting Equipment, Oil Storage and Oil Fires, Salvage Operations, Building Inspections, Exposures, Care of Hose, Electrical Hazards, Mechanical Refrigeration and Ventilation. They are but a few of approximately seventy-five recommended by this Committee for use in fire colleges that are being established over the country. We are using all of these in our school and the men are eager to get the knowledge.

Men are taught the proper distance to keep water lines from electric wires, the voltage being recognized by the type insulator used. The local power company will give you cooperation along this line.

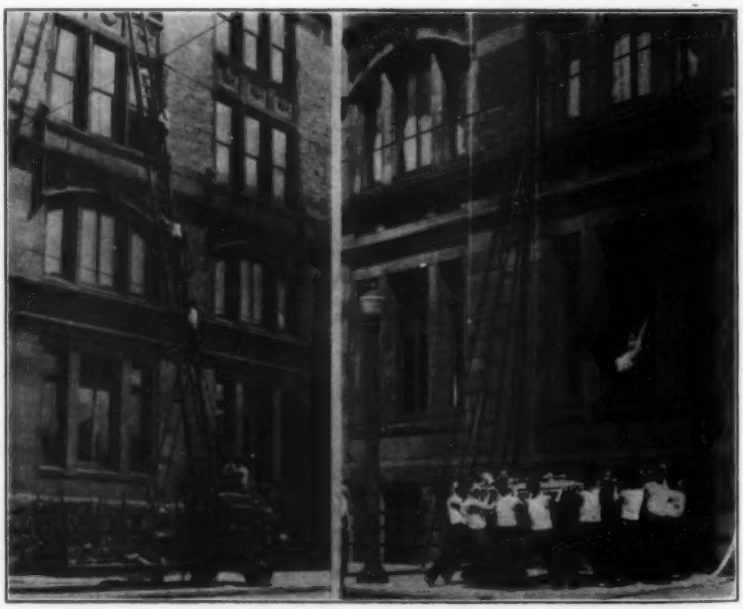
We give quite a bit of time to the study of fire hose, its construction and the proper care of same. Every fireman should realize the necessity of having the water carrier in good condition at all times. Water is very essential in extinguishing fires but with a bad carrier it is useless.

Ladder work in the Fire Department is indispensable. Too many Fire Departments neglect this branch of the fire service. All of the men taking the course in our school are taught the operation of the aerial ladder and the proper use of portable ladders. So that the course in this work may be complete, men must not be placed in one position at all times but changed so as to make the course complete.

Mechanical refrigeration is completely covered by lectures, along with the use of gas masks. Electrical refrigeration is part of the modern building. Firemen should be amply protected against the deadly fumes that may permeate the structure and the department should be equipped with proper masks for this emergency.

First aid is essential in training firemen and we give it a

(*Continued on page* 867)



Volunteer Firemen Receiving Practical Training

At the left are some firemen who are being taught how to carry hose up ladders, and at the right the students are receiving instruction in the use of the life net.

Reduction of Incendiarism

Types of Incendiary Fires — The Necessity for Careful Preservation of Evidence—Evils Arising from Over-Insurance

By CHIEF JOHN C. MORAN, Fire Department, Hartford, Conn.

Among the problems of the Chief of the Fire Department, one of the most vexing is the apprehension and conviction of the arsonist. This criminal is usually a past master in covering up his tracks, and what with this and the danger of the destruction of the evidence by the fire itself, the job of fixing the crime upon the incendiarist is no easy task. The following paper contains some excellent suggestions on the subject of arson:

Chief John C. Moran

THE subject of this paper, Reducing Incendiarism, the burning of property through the act of a pyromaniac, for spite or for the purpose of hiding a crime, I assume includes arson, the malicious firing of any building, structure or property with the intent to defraud an insurance company. The last named type of fires, as we all know, greatly exceeds all of the types which are not set for financial gain.

Of the first three types of fires those set by pyromaniacs are more numerous than the other two. Many cities have experienced these fires, which generally happen in groups or sporadically and are controlled only by intelligent cooperation between the Police and Fire Departments. In fact the number of all such fires, including arson cases, can be greatly reduced through such cooperation. How many times have we heard the remark made that it is impossible to get a conviction, as all of the evidence has been burned up and the case dropped. Policemen detailed for this work should be men trained especially for it and be available whenever called upon, and as most of the evidence is of a circumstantial nature, it is necessary that considerable care should be exercised in getting proper evidence to present to the state's attorney. So it is quite evident that it is absolutely necessary in controlling these fires to have this cooperation between the Police and Fire Departments to the fullest extent.

Need of Police Cooperation

In the control of arson, those fires set to collect the fire insurance where arson was suspected, it has been too common a practice, when evidence to convict was difficult to obtain, to drop the case too soon. Very often this indifference was and still is caused by the fire and police officials lack of cooperation.

Preservation of Evidence Necessary

When a fire is of a suspicious nature it should be immediately investigated and every effort made to preserve whatever evidence is found until the police officials are notified and if necessary have photographs taken of conditions. These photographs, as well as copies of testimony of all witnesses or persons examined in connection with the case, should be kept so as to be introduced, should the case be brought into court. This investigation should include checking up the financial condition of the person under suspicion through banks, concerns having business connections with him, as well as his books and invoices, which may very often give the reason for the fire.

Insurance Payment Should be Held Up Until No Incendiarism is Certain

In all cases under investigation, unless satisfied the fire was not set, the insurance agents should be notified to hold up all payments after the adjustment has been made until they have been told to make such settlement and there should be no great haste in closing the case, as occasionally unexpected evidence may be obtained some time after the fire has occured.

Valuable information can often be obtained from the local commercial agencies, when they have knowledge of the financial condition of a business concern which may lead you to have more frequent inspections made of the property—if necessary two or three times a week. This treatment seems to have a wholesome effect, for in most of these cases instead of burning up, they close up, and if there should be a fire you will have an approximate idea of the value of the stock that has been carried to compare with the proof of loss.

Evils of Over-Insurance

Fire insurance is one of the most important factors in modern business life and it would be impossible to carry on business without it, yet unscruplous persons find it altogether too easy to get agents who will willingly place an excessive amount of insurance on their property or goods, frequently but a short time before the fire happens. This, I believe, is one of the principal reason for so many arson fires. If these insurance agents did a little adjusting at the time they are getting this business, as carefully as the reliable adjuster conducts his

"In all cases under investigation, unless satisfied the fire was not set, the insurance agents should be notified to hold up all payments after the adjustment has been made, until they have been told to make such settlement and there should be no great haste in closing the case, as occasionally unexpected evidence may be obtained some time after the fire has occurred."

business after a fire, many of these fires would be eliminated.

Fire Departments Should Keep Complete Records

Every Fire Department should keep complete records of all fires responded to, as well as of all building inspections, fire losses, etc. These card records prove very interesting as well as valuable aids in conducting many of the investigations. The records should be available for any insurance agents or officials desiring information in connection with their business.

Every state should have an arson law which provides adequate punishment for anyone found guilty of committing arson.

The person who deliberately sets a fire in a building occupied by men, women or children, so as to make a few dollars by collecting fire insurance, deserves less consideration than any other type of criminal.

(From a paper read before the annual convention of the International Association of Fire Chiefs at Havana, Cuba.)

Boat Trips to Havana

Three large parties of chiefs and their friends and relatives were taken to Havana by boat. The largest was that from New York which carried over 300 delegates. It was sponsored by the American-LaFrance and Foamite Corp., and was conducted by the National Tours, Inc. An unusually enjoyable program of recreation was provided, including a costumes and masquerade ball on the return trip, and at which three members of the Association's party won prizes for costumes.

The Southeastern party, which went to Key West by train, and then across to Havana by boat, included over two hundred persons, while the special group from New Orleans, totaled fifty.

The boat trips provided an excellnt means for the delegates to become acquainted with each other before arriving at the Convention City.

NOTE—*A list of those present at the I. A. F. C. Convention at Havana, Cuba, appears on page* 868.—EDITOR.

A Convention Wedding

Two members of the New England delegation to the Havana Convention chose that city in which to form their matrimonial alliance. Darrah D. Syme was married to Miss Louise G. Bryer, daughter of Mrs. Frank H. Bryer, the latter also being a member of the Fire Chiefs' party. The wedding, which was a civil ceremony, was performed in the office of a lawyer and notary in the new Bacardi Building. The witnesses to the wedding were Chief Joseph S. Lawton, of Newport, R. I., President of the New England Association of Fire Chiefs, and John S. Coggeshall, a well known "buff," also of Newport. Due recognition of the fact that it was the first civil wedding to be performed in the Bacardi Building was made by the Bacardi Company, who staged an informal party for the participants.

Berkeley Issues Membership Cards

As means of having the municipality become conscious of fire prevention work, Membership and Pledge Cards in the Berkeley, Cal., Fire Prevention Bureau, have been issued to the children of the city and others. On the reverse of the card is the pledge that the member will observe certain simple fire prevention rules.

Berkeley has been very successful with its fire prevention work. Last year the department made 11,086 inspections and as a result, it is claimed that the department made 165 fewer runs. It also resulted in decreasing the annual per capita fire loss to forty-seven cents.

The cornerstone has been laid for the new Eggerstville fire station in Buffalo, N. Y.

The Council of Green Bay, Wis., has authorized the Fire Department to respond to fires in other valley cities. The municipalities that may be aided include De Pere, Kaukauna, Appleton, Neenah, Menasha, Oshkosh, Fond du Lac, Sheboygan, Manitowoc, Two Rivers, Oconto, Marinette and Menominee, Mich. The city asking help must pay for all damages to equipment of visiting departments, must supply the necessary gasoline and oil, and food and lodging for the firemen. Each city to the agreement must carry its own liability for injury to its men while on outside duty. The league for mutual aid is the plan of Chief Ralph H. Drum of Green Bay.

Photo courtesy National Tours, Inc.

Members of the Eastern Party to the I. A. F. C. Convention Lined Up on the Afterdeck of the Steamship "Scythia," En Route to Havana

The Volunteer Fire Department

By N. N. WOLPERT,
Assistant Editor, FIRE ENGINEERING

A Series of Articles on Volunteer Fire Department Administration and Operation.

Simple Hose Evolutions for Training Volunteer Firemen

This article, the thirteenth of a series, describes some of the drills to follow in order to train the men in connecting hose lines, the use of siamese lines and gate valves. These outdoor drills may be carried out in front of the fire station, or in the rear yard, if there is one.

EVEN though a company of volunteer firemen may not be fortunate enough to own complete equipment, the drills described in this chapter can be carried out by almost every fire company. It is only necessary to have a few lengths of hose, nozzles, a siamese and other accessories. The drills can be made interesting and the work should be stopped when the men show signs of becoming fatigued.

There are many drills that may be performed in laying single lines of hose, but the one described seems best fitted for the small department where the membership is small.

The drill consists of stretching three lengths of 2½-inch hose, connecting the line to a hydrant, putting on a nozzle, and then starting the flow of water.

Hose is laid out on the drill ground as shown in Fig. 1, and the men line up about one hundred feet away from hose. Man No. 1 has a nozzle.

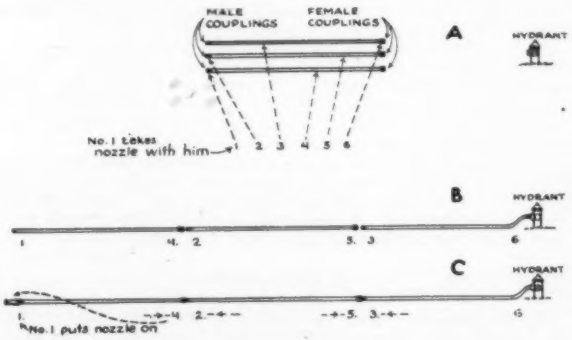


Figure 1

At the command "Go!" the men quickly take their positions on sections of hose as follows: No. 1 to the end of the section which is to carry the nozzle; No. 2 to the male end of the section which is to be second in line (and which will connect to female end of length of hose which is to carry nozzle); No. 3 takes his position on the length to be attached to the hydrant, about fifteen feet from the male end; No. 4 takes his position on the nozzle section about fifteen feet from female end; No. 5 is at the intermediate section about fifteen feet from female end; No. 6 takes the end of the section to be attached to hydrant. Note that in the placement of hose, all male connections are at one end and all female at the other.

Firemen 3 and 6 take their section directly to the hydrant, whereupon No. 6 makes his connection and stands ready to turn on water. Nos. 3 and 5 bring their section out until the female connection is nearly opposite the male end of the hydrant section. Then No. 5 drops the hose and steps back to the female coupling, as shown at B, Fig. 1, No. 3 also steps up to the coupling with No. 5 and the two men make the connection.

In the meantime No. 2 drops his section and takes hold of the female end of the nozzle section, and when it is in line with the male end of the intermediate section, he calls to Nos. 1 and 4. Nos. 4 and 2 make the connection, and then No. 4 takes his position with No. 1 at the nozzle. No. 1 places the nozzle on the line and calls for water, whereupon No. 6 opens the hydrant.

A, B, and C of Fig. 1, show the three steps in completing the evolution. Dotted lines show the movement of the men from their assigned positions on hose lines.

Six men, and an officer, if available, are needed in the above drill. The officer may take place of one of the men if the company is short handed.

Siamesing Two Lines

In many departments only 2½-inch hose is used. In this evolution, therefore, it will be assumed that only 2½-inch hose is available and only 2½-inch hose will be used. Departments which have 3-inch hose may use this instead of the 2½-inch for the single line to which nozzle is to be attached. In the drill it is necessary to have five lengths of 2½-inch hose; one 2½-inch x 2½-inch siamese connection and one 1¼-inch open nozzle.

The four steps in the evolution are shown in A, B, C and D of Fig. 2.

The men are lined up as in the previous drill, but in this evolution eight men are required instead of six to perform it satisfactorily. (If only six men are available, Nos. 4 and 5 may be eliminated. No. 2 or 3 will have to carry the siamese fitting instead of No. 4. No. 6 will have to see that the two intermediate lines stop at the proper position to make connections.) To simplify explanations, the sections of hose will be identified by letters, *e*, *f*, *g*, *h*, and *i*.

The five lengths of hose are laid out as shown, all female couplings being to the right and all male to the left.

The men are lined up as shown, No. 1 carrying the nozzle and No. 4, the siamese connection.

At the command "GO!" the men stretch the hose, first taking their positions as follows:

No. 1, male end of length *i*.
No. 2, male end of length *h*.
No. 3, male end of length *g*.
No. 4, fifteen feet from female end of *l*.
No. 5, fifteen feet from female end of *h*.
No. 6, fifteen feet from female end of *g*.
No. 7, female end of *f*.
No. 8, female end of *e*.

Length *i* is carried straight out, with sections *g*, and *h* following closely behind. Firemen 5 and 6 call a halt when lines *e* and *f* are in position and while lines *g* and *h* still overlap *e* and *f* about two feet. No. 4 regulates the placement of line *i* so that there is about one foot overlap of line *i* over *g* and *h*.

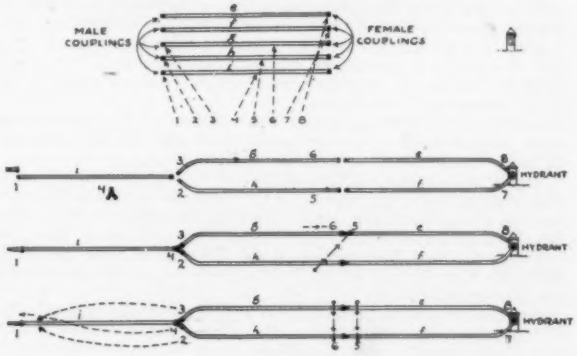


Figure 2

When in the above position, the lines are dropped. No. 4 holds the siamese while Nos. 3 and 2 make connections of their respective lines. Either No. 3 or No. 2 then holds the siamese while No. 4 makes connection of his line. In the meantime No. 1 puts the nozzle on.

No. 5 takes position as shown in C and assists No. 6 in making his connection. Both Nos. 5 and 6 then cross to the other line as shown in D and make their connection. Nos. 7 and 8 connect respective lines to hydrant.

When the coupling has been completed, No. 3 takes the nozzle with No. 1 while Nos. 2 and 4 take positions on the hose line behind nozzle men. No. 1 calls "Start the water," and No. 8 opens the hydrant.

If hydrant gates are to be used, both Nos. 7 and 8 will have to carry them, and Nos. 5 and 6, after making their couplings will then report at the hydrant and assist Nos. 7 and 8 in connecting the hose to gates after the gates are in position. No. 8 then opens the main valve, while Nos. 7 and 5 open individual gates when the command "Start the water," is given.

If eight men are available, besides the officer, then the officer just directs the men. If only eight men are at hand, including the officer, then the officer takes the position of No. 3 and gives the order to start the water.

Winding Hose Lines

The following drill is to train the men in laying a single line of hose and then dividing it into two separate lines each equipped with a nozzle. This evolution requires the services of eight men.

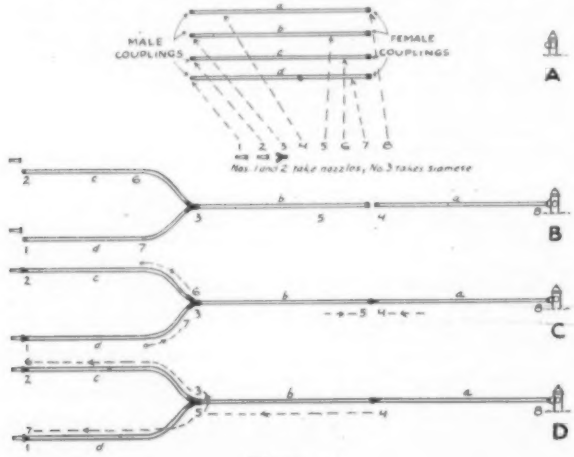


Figure 3

The hose lines are laid out in a yard near a hydrant as shown in Fig. 3. All female couplings are to be adjacent to the hydrant while the male couplings are to be furthest away from the hydrant.

The men take their positions as shown in the illustration, Nos. 1 and 2 each carry a nozzle, No. 3 has the Y-connection. At the command of "Go," the men take positions as shown by the dotted lines in Fig. 3. No. 1 goes to the male coupling of section *d*, No. 2 goes to the male connection of *c*, No. 3 goes to the male connection of *b*, No. 4 goes to a point one third the distance on section *a* between the male and female couplings, No. 5 goes to a point one third away from the male connection of section *b*, No. 6 goes to a point one third away from the female coupling of *c*, No. 7 goes to a point one third the distance away from the female coupling on section *d* and No. 8 takes his position at the female coupling of section *a*.

The operation does not cease here, but just as soon as the men have reached their respective positions on the different sections of hose, they continue on with the evolution.

Sections *c* and *d* are drawn to the left as shown in the illustration, section *b* does not travel far for when the section *a* is drawn over to the hydrant, the female coupling on section *b* must overlap the male end of section *a*.

Firemen 6 and 7 on section *c* and *d* and No. 3 on section *b*, take care that sections *c* and *b* do not go too far away to make the Y-connection.

As soon as the men reach the positions as shown in B of Fig. 3, they make the connections. In making these connections, 6 and 7 when they have their sections in positions, go to the female couplings of their respective sections and assist No. 3 in hooking up the Y-connection to the single and parallel lines. Likewise Nos. 5 and 4 go to the female and male end of the hose connection, respectively, and make the connections. No. 8 makes a connection of section *a* to the hydrant. The hose is in position and is connected up with the men in positions as shown at C in Fig. 3.

After the connection has been made, Nos. 6 and 7 go to the nozzle to assist 1 and 2 respectively in operating the nozzle when the water is turned on. Just as soon as the connections to the line are complete, the officer in charge gives the command to turn on the water.

While No. 8 is turning on the water at the hydrant, Nos. 6 and 7 will have time to get in position at the nozzle. Fireman 5 takes his position at the Y-connection and thus completes the evolution. As soon as the water is turned on, the streams are in operation.

Effect of Friction Loss

By means of a number of simple demonstrations, the firemen may be shown the importance of friction in cutting down on the effectiveness of a hose stream. The officer should remember that these layouts are for demonstration purposes only and are not evolutions that are performed on the fire grounds.

The simplest exhibition is to connect a fifty-foot length of hose to a hydrant having two outlets, and to place an 1⅛-inch nozzle at the end of the hose line. To the other outlet connect a one hundred-foot line equipped with a 1⅛-inch nozzle. Have the two nozzle men stand near each other. Turn the water on and note the effective reach of the two streams. Increase the length of the longer line to 250 feet and note the difference. This exhibition will show the men the value of using short hose lines wherever possible and to eliminate all surplus hose.

Another demonstration is to connect three hundred feet of hose to one hydrant outlet and to place a 1¼-inch nozzle on the line. On the other hydrant outlet place a Y-connection and from this lead two lines of 2½-inch hose each 250 feet long. Connect the lines to a siamese and from the single end of the siamese connect fifty feet of hose. In other words, you will then have two lines of hose from the hydrants each 300 feet long and each with a 1¼-inch nozzle, although one of the lines is siamesed into two parallel lines for 250 feet. Turn the water on and note how dividing the flow by the two parallel lines decreases the friction losses and increases the effectiveness of the stream.

If the Fire Department has both 3-inch and 2½-inch hose, connect one line of 3-inch hose say 300 feet long to one hydrant outlet and a similar length of 2½-inch hose to the other outlet, and provide both lines with 1¼-inch nozzles. Turn the water on and note that the friction loss is less for 3-inch hose and that the stream issuing from that line is more effective.

These are just a few of the demonstrations that can be arranged to show the men the factor that friction plays in hose streams. A hydrant with a double outlet was used in the arrangements described so that water at practically the same pressure would be supplied to each of the two lines.

A Correction

In the previous chapter on "Drills for Properly Moving Hose on Ladders and Stretching Hose Lines," there was a transposition of cuts. The sketch shown at the left on page 824 should have been the right cut, and vice versa.

LaSalle Follows Lead of Chicago

Chicago is not the only municipality that has been having trouble in paying its employees. LaSalle, Ill., a city of 15,000 inhabitants now has an official staff consisting of the Council, four firemen and three employees of the Water Works.

Because of financial difficulties the city discharged the force of ten policemen including the Police Chief, street sweepers, meter readers, city hall janitor and the staff of the city hall. Only the Fire Chief and the drivers of the fire apparatus have been retained, but with reductions in pay. None of the employees, including the mayor, has been paid for more than two months.

The 1932 convention of the Nebraska State Volunteer Firemen's Association will be held in Falls City. Three other cities presented bids. The 1931 convention was held in Norfolk, October 20-22, and ended with a parade. Elmer L. Rhoads of Kearney was elected President, George Tobien, Valentine, First Vice-President; Robert A. Barlow, Sidney, Second Vice-President, and Fred Muller, Norfolk, Secretary-Treasurer.

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

TO alleviate somewhat the hazards of employment and to safeguard the finances of the older employees, Fire Departments have established pension funds. Volunteer Fire Departments do not have the problem of retirement awards for its members, but they do have relief funds in case of accident and disability.

These funds are maintained through gifts, taxes and so forth. It is quite a task to see that the income is sufficient to maintain a proper reserve.

On this page is the problem on pension or relief funds that is treated in this issue. In the box on the following page is the question that will be discussed in the following issue. Should you have any comments that you would like to add to the next discussion, you are invited to write to the "Round Table Editor," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y.

Discussion of the Question

There appears to be no universal method of raising the necessary moneys for a Pension Fund, although in administering the fund, the Fire Department has a good representation on the Board of Trustees or whatever board has control of the fund. The letters that have been received follow:

Charles A. McGinley, Chief, E. Orange, N. J.: The method of building up our Pension Fund is governed by law. All fire and police pension funds in the State of New Jersey are governed by a law passed in 1920, which compel both departments in each city to merge their funds. The following moneys are placed in the fund as required by law: 2% of all members salaries, double that amount from the city, all fines levied against the policemen and firemen, half of all rewards received and a small percentage of the premiums written by foreign Insurance Companies for automobile fire insurance.

This fund is administered by a Commission of one fireman, one policeman, the Mayor, the Chief Financial Officer of the City, and a fifth member appointed by the four.

The benefits paid are half pay to all retired members, half pay not to exceed $1,000 to all widows of deceased firemen and policemen, and if there be no widow but children under the age of sixteen, one child would receive $25 per month, two children $40 per month, and three children or more $1,000 per year, until the age of sixteen years is reached. Dependent parent or parents can also receive a pension, not to exceed $1,000 per year.

To improve the Pension Fund, I would suggest the maximum age limit of all applicants should be twenty-five years instead of thirty and thirty-five years as it is in most departments today. With this arrangement, a man would have to serve at least five years longer than he would if he entered at thirty years of age. I am of the opinion that every member of the fund should pay another two per cent of his salary, making it four per cent and the City twice as much. With this arrangement, I believe all Pension Funds in the State of New Jersey would be placed on a sound basis.

H. R. McMillan, Chief, Jacksonville, Fla.: Our Pension Fund is derived by a levy of 3/10 of one mill tax, and 1% of firemen's salary.

The fund is administered by a governing board of the city Fire Department (city commission) and Advisory Board or Committee, composed of three members of the Fire Department elected each year, by members of the Fire Department, who allow or deny pensions to those who may request retirement, or are retired otherwise. No pension can be granted except by the approval of the Advisory Committee.

Pensions may be granted to members serving twenty years or more. Compulsory retirement comes after reaching the age of 65. Permanent disability is cause for retirement at anytime. Widows and children, or children under sixteen of age, and dependent mothers receive pensions.

Disability pensions, either sickness or injury, are 50% of the salary received at the time of retirement. Twenty years or more retirement on request, is 50% of the average yearly salary for back three years.

There should be a graduated scale of five, ten, fifteen and twenty years service on retirement on account of sickness, increasing to 2% of the salary for the pension fund. Eliminate all pension donations to widows with children, when widow remarries.

C. W. Drage, Captain and Secretary Firemen's Pension Fund, Elyria, Ohio: Our pension is supported through taxation. All donations received by this department are placed in the Pension Fund.

The Board is composed of two citizens, two councilmen and two members of the Fire Department elected annually who make the rules and regulations governing the payment of pensions.

Members appointed prior to September 9, 1929 must serve twenty years before they are eligible to a pension. They receive 40% of the monthly salary of their rank held at the time of retirement. Members appointed after September 9, 1929 must serve twenty-five years before they are eligible to a pension. They receive thirty per cent of the monthly salary of their rank held at the time of retirement.

In addition to the above amounts all members will receive an additional sum equal to one per cent of such monthly salary, for each year, not exceeding ten years, which he might have served in addition to the twenty or twenty-five years of service in said department.

Widows who apply for a pension will receive one half of the pension her late husband had been receiving.

Olander Lind, Chief, Kansas City, Kan.: By a tax levy of one tenth of one mill on each $100 valuation of property in our city, we build up our pension fund. A member of the Fire Department retiring receives one half of the salary received at time of retirement.

I would suggest that each member in the department be assessed a certain sum each month, to apply to the upkeep of this fund to improve the present method of operating the pension fund.

HERE IS THE PROBLEM

What methods have you for building up your pension or relief funds?

How is this fund administered and what are some of the benefits that are paid?

What suggestions have you for improving the operations of your pension or relief funds?

W. D. Simmons, Chief, Phoenix, Ariz.: Our Pension fund is built up by an act of the legislature which gives us 2% of insurance premiums of all foreign companies writing fire insurance in our city. This is collected by the State and we are given a check for the amount each year. In case the fund falls below $25,000, the members of the department are assessed 1% of their wages till it reaches $25,000.

This fund is administered by a board consisting of the Mayor, Chief of the Fire Department, City Treasurer, City Attorney, and two members of the Department elected to serve, one for 4 years and one, 6 years.

So far only pensions are paid from this fund.

W. A. Foster, Chief, Boise, Idaho: We have no state or local pension fund. Our local relief fund is built up by dues, dances, donations and entertainments.

We have what we call the Boise Fire Department Benevolent Fund with dues of 50 cents a month. We pay $10 a week for 8 weeks and $7.00 a week for 7 weeks and $75 at death.

Charles H. Fuller, Chief, Pawtucket, R. I.: The pension fund in this city is built up by donations of 1% of the salaries of all permanent members of the department, also, all moneys coming from theatres, dances, etc., where a fireman is required to be on duty. This fund is administered and maintained by the city through the City Treasurer, who has the power to invest same to the best advantage. Any member of the department who has served 25 years can be placed on pension at his own request, or any member who has been permanently disabled can be placed on pension by the Board of Aldermen. A member who is placed on the pension shall draw one half of the salary he has received at that time for the rest of his life.

Lawrence E. Reif, Chief, New Haven, Conn.: Before the enforcement of the 18th Amendment both the police and the firemen received five per cent of the liquor license fees for the pension fund until the sum reached $50,000. Now each member is assessed 2% of his wages and the balance of pension fund is made up by the city in its annual budget each year.

A member may be retired after 25 years service on his own application, by a vote of the Fire Commissioners and the Mayor's approval. A member may be retired at anytime for injuries received from fire duty. A member is retired at no less than half pay. The amount is left to the Fire Commissioners, and full pay has been allowed in extraordinary cases. An amendment was passed by the legislature on May 13, 1931, at the request of the Board of Aldermen and the Fire and Police Commissioners that a member of either department who has served 10 years and who has contributed to the fund, upon his death, his widow shall receive one quarter of his pay if in active service or one half of his pension if retired. If killed in service the pension is due after compensation ceases. The widow forfeits her pension if she remarries.

The widow does not receive a pension if married to pensioner after his retirement.

If no widow survives, the minor children will receive the same amount until they reach the age of 16 years, as the commissioners may decide.

Marion C. Whitmore, Chief, Oskaloosa, Iowa: Each member of the department is required to pay 1% of his salary into the pension fund. The city also levies ½ a mill each year for the upkeep of the pension fund.

The benefits consist of a disability clause. That is, if a man becomes disabled he will draw such pension as the board may direct, provided such disability occurred in line of duty. It also states that a man may be pensioned after 20 years service provided he is 52 years of age. The fund is administered by the City Treasurer, City Solicitor and myself.

James Ellemeyer, Chief, Kittanning, Pa.: Our department is volunteer. The state of Pennsylvania collects a tax on all fire insurance companies from other states that write business in Pennsylvania (called a foreign fire insurance tax). In order to collect this money which is used for relief and death benefit purposes, each district must have a Firemen's Relief Association. In Kittanning we have such a Relief Association and receive from the state about $1,200 in normal times. The fund has been in existence here for quite a few years.

It is controlled by 2 members from each of our 3 companies, who meet regularly to administer it; $200 is paid in case of natural death, $500 for accidental death on duty. Other relief and doctor bills, if necessary, are paid as decided by committee. From this fund is paid our dues to the Western Pennsylvania Volunteer Firemen's Association on a death policy. This Association pays $100 at death. We also pay for a group accident policy from this relief fund. In addition the borough carries a compensation policy which covers all firemen while on duty both in and out of the borough.

I would suggest that all firemen keep a close check-up on the action of their state assemblies in order to keep from having the foreign insurance tax diverted to other agencies and for other than firemen's relief.

C. J. Carrigan, Chief, Terryville, Conn.: Being a volunteer department, we have no pension fund, but we have a relief fund.

All fines on members for not attending fire meeting or drills and roll call, and all checks received for work done by the department are placed in the relief fund.

A member injured during fire duty has his hospital and doctor bills paid. I would suggest for the improvement of the present method of maintaining the relief fund, the holding of socials when funds are needed.

John Link, Chief, Blue Island, Ill.: Our pension fund, which is not yet on a paying basis, derives its revenue as follows: 2% insurance tax, 2 mills general taxation, 1% of regular's salaries, 1% of all licenses and permits, excepting dog tax. All fines or violations of fire ordinances.

Our department as yet has no one on the pension list although two of us have served our specified time of 20 years, but are physically in condition to continue on the service for some years to come.

Frank B. Moore, Chief, Nashville, Tenn.: Each member of the department under civil service is assessed 1% per month of his salary, which amount is placed into the pension fund. The deficit is made up by special assessment by the city.

The pension fund is under control of 5 outside men who compose the Civil Service and Pension Board. They pass on all cases of discipline awarding of pensions, etc. Men are retired at half pay. Nothing is paid other than this.

The present method of our pension fund has proven satisfactory so far.

Frederick W. Schier, Chief, Weehawken, P. O., Union City, N. J.: Our present method for building the fund is by the assessment of 2% of salaries.

The funds are administrated as follows: benefits paid one half of salaries at retirement, $1,000 to widows at death of active or retired man and the widow's children are taken care of until they reach the age of 18.

C. E. Carlson, Chief, Tacoma, Wash.: Pension fund consists of all bequests, fees, gifts or donations given or paid to the Fire Department. A tax not less than two per cent or more than four per cent of each man's regular monthly salary including substitutes contributes to the support of the pension fund. A tax is also placed for an amount estimated to be required not to exceed one half mill of the assessed valuation of the property in the city. If one half mill is levied 5 per cent is paid from salaries; if less than one half mill is levied, 2 per cent from salaries.

The Board of Trustees consist of 10 members—the mayor who is ex-officio Chairman, 3 members from the City Council, 6 members of the Fire Department (who

(*Continued on page 866*)

HERE IS THE PROBLEM FOR THE NEXT ISSUE

What steps do you take when it is necessary to condemn a building?

Where the owner brings the case to court, how do you handle the situation?

Do you generally find that the public is against your orders?

With the Editor

Protection of Wild Life Refuges

The guarding from fire of the refuges for wild life along the upper Mississippi River is now assured through a voluntary system of protection which has been perfected. The Government Refuge Forester has completed a lookout system, including sixty wardens who will serve without pay and who will immediately report fires in the bottomlands to the nearest ranger station or to the headquarters of the Refuge at Winona, Ia. These wardens have been appointed from points that overlook large sections of the Refuge and the consequence will be that every mile of the river territory will be under the watchful eye of one of these wardens.

As an additional protection, equipment for fighting forest fires is stored at several points along the Mississippi which are available to the nearest ranger. Each of the rangers is furnished with the names of volunteers who he can call upon on short notice for assistance in fighting large fires.

Three other precautionary measures have also been adopted. At various parts of the Refuge there have been placed small metal structures containing four hand pumps, a drum of water of sixty gallons capacity and twelve shovels for use in fighting fires. The other two measures for safeguarding the forests will be a fire-fighting truck stationed at Winona, Ia., during the drought season, and a speedboat to be used for quickly transporting men and equipment to points along the river when needed.

With these methods it is hoped to prevent disastrous fires which occur, especially in extremely dry weather, and are exceedingly destructive to the wild bird, animal and fish life which the refuge is intended to conserve. The volunteer system avoids expense and the men who have given their services are enthusiastic over the work, which will insure its efficiency.

Mutual Aid Among Fire Departments

A plan that is gaining in popularity in various parts of the country and which bids fair to become the usual procedure, especially among smaller cities in a few years is that of mutual assistance in a systematic manner among Fire Departments of adjoining municipalities. Already in several different localities some such plan of cooperation has been established. In Westchester County, N. Y., a so-called "Fire Chiefs' Emergency Plan" has been inaugurated and has been successfully working for over two years. In Rockland County of the same state a similar scheme is being worked out. In Illinois, under the leadership of Chief Al. Herring, the Egyptian Fire Fighters' Association has worked out quite a successful plan of mutual help, and an inter-city fire protection scheme is now being attempted in Wisconsin. This latter plan originated with the city of Green Bay, and will probably include DePere, Kaukauna, Appleton, Neenah, Menasha, Oshkosh, Fond du Lac, Sheboygan, Oconto, Marinette, Menominee, Manitowoc and Two Rivers.

In New York State one of the principal obstacles to the working out of cooperative plans among Fire Departments has been cleared up. This was the settling of the responsibility in regard to accidents to the men and apparatus of assisting departments and companies. Through the efforts of the Fire Chiefs' Emergency Plan of Westchester County a law was passed by the last legislature and signed by the Governor making the department calling for assistance directly responsible for any such damage or injury. This is a long step in advance in the perfecting of plans for mutual assistance and no doubt other States that have not already adopted such a definite ordinance will shortly do so.

There can be no doubt that the plan of systematic mutual assistance between cities is a most important development in the science of fire fighting. Help from one department to another in case of dire need has of course always been rendered cheerfully, but the plan of arranging such assistance upon a fixed and scientific basis, so that each city will know definitely what departments will come to its assistance upon call and how many apparatus and men can be relied upon is a comparatively new development in fire fighting. In fact, the system is yet in its infancy and will require much trial and experimentation before it can be worked out upon a successful basis. However, in many localities a very excellent start has been made, and the experiences and mistakes of each of these groups will help all to perfect a workable system in the end. When this is finally accomplished, a mighty stride in fire protection will have been made.

Injunction in Standpipe Ruling

An interesting case has developed in New York City in which the authority of the Tenement House Commissioner is questioned as regards the ordering of increase in standpipe outlet sizes. The suit was brought by a number of owners controlling some three hundred apartment buildings to restrain the Commissioner from enforcing his orders to increase the outlet from the standpipe fire lines in the structures under their control from one and a half to two and a half inches and other changes. The contention of the owners was that the cost of these changes would amount

to $5,000 in each instance, and that the Commissioner had no authority to order the changes.

The claim of the Commissioner was that he had authority under the Multiple Dwellings Law to order and enforce the alterations. Justice Julius Miller, of the State Supreme Court, ruled that under the law the Tenement Commissioner is given power to compel owners of apartment buildings to keep their standpipes in repair and that, according to the statute, when, in his judgment, the dwelling becomes dangerous to life or health, he may declare it to be a public nuisance to the extent specified and may order alterations believed to be necessary. However, in the cases before the court, the Justice ruled, the Commissioner had not declared the existing standpipes dangerous and so the Court decided that the Commissioner "has no power or authority to order the alteration of standpipe fire lines or their connections after a building is completed and a certificate of occupancy issued."

It would seem that this decision might have an unfortunate effect in encouraging violators of the fire safety provisions of the Tenement Law in evasions of its provisions. The law is intended to safeguard such buildings from fire and if, through technicalities of law, owners can evade its provisions, its good effects will largely be nullified.

A FIRE FAN'S IMPRESSIONS OF THE HAVANA TRIP

By PAXTON MENDELSSOHN

(With apologies to Odd McIntyre, and everyone else.)

Paxton Mendelssohn, the well-known Detroit fire fan, took the journey to the Havana convention of the International Association of Fire Chiefs with the Eastern party aboard the S. S. Scythia, and we simply had to give him this outlet for his pent-up enthusiasm over the trip.—EDITOR.

THE New York Fire Department band bidding us a glorious farewell. Chief Ziegler being wheeled down the pier on a baggage truck. The general excitement of sailing —streamers, whistles, and hysterical goodbyes. Those girls from Boston, and the acquaintances made through mutual lonesomeness—Bethlehem and Easton. Case and Shepperd with their ever present cameras, and what pictures they took! Ever-smiling Frank Van Rensselaer and dignified Art Sullivan of the American-LaFrance. Chiefs McElligott and Tracy of New York always seen together. Joe Green, the big shot of the Eureka Fire Hose—the best story teller aboard the ship and the man who never drinks but likes to smell the corks. Chief Hedden of Buffalo having a wonderful time. Bessie Shepperd (Mrs. Fred Shepperd) a darn good scout; likewise Jean Stultz, the serious girl from Indianapolis, who somehow reminded me of Cleo Mayfield, the actress. Tom Farrell, the after lounge steward. Who remembers how many bacardis he served us? Edith Batson, the little girl from Michigan who made good in the city, and her wonderful peach beach-pajamas. The flying fish doing their stuff—also the porpoises. Wonderful weather, but a bit choppy off Cape Hatteras—to be expected.

Paxton Mendelssohn

THEY got us up too early at Havana. Our first impressions upon landing—heat, humidity. linen suits—and within two hours we all went native. How many linen suits and straw hats did they sell during the Chiefs' Convention? Those little boys who sell unmentionable toys. The glorified peace and splendor of the National Hotel and its gardens. Chief and Mrs. DeMay of Detroit having a wonderful time in a quiet way. Chiefs Scott and Evans, and Jay Stevens, very busy and seen everywhere. Wish I had space to mention all the chiefs. Seagrave Sales Manager Stevenson, better known as Stevey, a regular attendant at the conventions. The mob of would-be guides around the Plaza Hotel. Was there ever a more beautiful convention hall than the "Centrale Asturiano"? The business-like manner of Chief Sullivan's conduct at the meetings and the sincere but not always harmonious attention of the delegates. Bill Brosnan and Dick Smith, the boys coming up the line for office, very busy but having a good time. Bob Browning of the Mack Company looking like a fashion plate. Father Coleman in his shirt sleeves enjoying himself, and with him our good friend Frank McAuliffe. The walks Ed Rumsey, Bert Case, and Mendelssohn took after midnight and the novel lines of approach by the natives. The Jai Alai games. How cordial the Cuban "Bomberos" (firemen) were to us. Did you ever see so many perfume stores, and try and get a line on the prices? Natives sleeping on the sidewalks at night. Those boys who dive for pennies in the harbor. The beautiful buildings and boulevards of Havana and the funny narrow streets in the old section. The Cuban "policios" sure were efficient. Did any one miss seeing a rhumba dance? There never will be another Chiefs' Convention as interesting as this one was.

THE trip back just as delightful as the one going down—we knew each other better, and how! Case and Shepperd still taking pictures. Will you ever forget that dynamic little lady, Jerry Downs of the "Shoot the Works" company —a regular "it" girl. George Richardson as Ghandi at the masquerade ball. Who was the black face convict who wheeled him about—me. After all, wasn't it a nice party all the way through? Fond au revoirs but not goodbyes. See you in San Diego next year.

Boys' School Destroyed in N. H.

An early morning fire routed the students and families of seven faculty members of the Holderness School for Boys at Holderness, N. H., and caused damage estimated at $150,000. The blaze started in the east wing of the dormitory and spread so rapidly that when the blaze was discovered, the telephone wires were burned.

The bookkeeper of the school who discovered the fire, sent several boys to a nearby telephone to call for help. The fire alarm was rung in from a fire alarm box in Plymouth. The Plymouth Fire Department responded on the first alarm, and aid was also rushed from Ashland.

The Oklahoma Municipal League has awarded a 20-year service button to Chief W. J. Haymes of the Claremore, Okla., Fire Department in recognition of his twenty years service for his city.

At the annual meeting of the Suffolk County Volunteer Firemen's Association held at West Sayville, N. Y., Ernest Stoll, of Bayport, was elected President. J. Fred Flugrath of Rockville Center who has served as Secretary for the past thirty-two years, was re-elected.

Douglas A. Graham, State Fire Marshal of Kansas, in his monthly report stated that there were too many fires from unknown causes. Besides the fires from unknown causes, the second largest cause for fires has been the ones caused by electricity.

THE COVER ILLUSTRATION

At this time of the year when hunting parties spend many days in the woods, there is always the danger that some careless person will drop a lighted match which will fall on the carpet of dry leaves and start a forest fire. During the fall when the sap recedes in the trees and the leaves fall, it is not at all difficult for a tiny flame to develop into a serious forest conflagration. And if a steady breeze is blowing it means that many acres of timbered land will be destroyed. The cover illustration shows men digging a ravine to stop a fire in a Montana forest that endangered lives and property for miles around.

Questions and Answers

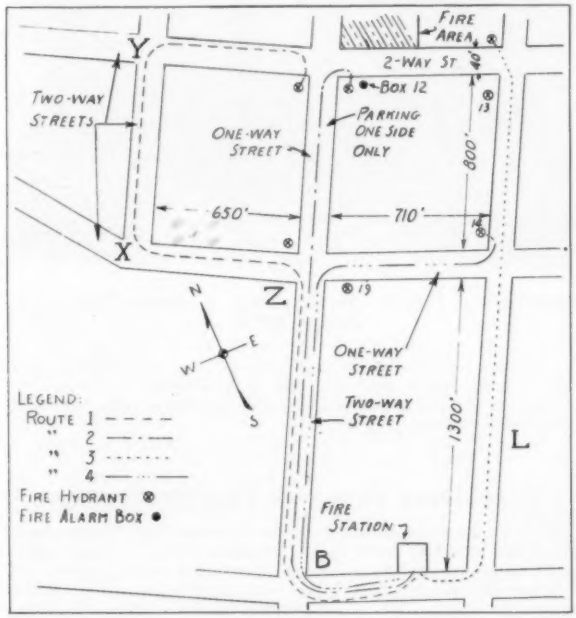
NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Right of Way

To the Editor:

You will note from the map herewith that a short section of street (800 ft.) is by a local traffic plan one way and while this works out badly it is not being discussed except as a fire rule.

Box 12 as shown is struck at 1:45 a. m. and fire is located, and is plainly visible to fire company as they turn in at B. The driver of leading apparatus uses route No. 1 but the second driver uses route No. 2, his claim being that there is no possible rule or local ordinance that can prevail against the State Law covering emergency apparatus, in this case Fire Department. The driver No. 1 argues that the local street rule comes first and he has no right at any time to "buck traffic"—fire or no fire and that he could be arrested and fined for using route No. 2.



Against this is the double argument that there are three bad swings to be made at points x, y and z, and the danger is very great of meeting other apparatus, which, being on a "one way only" street at y will quite likely be just coming straight ahead. In addition there is the lost time envolved, which is really the most serious question of all.

Route No. 3 is hardly a solution—as the street at L is in a dangerous condition, so much so that in answering to #14, route No. 4 is used.

A further point is that if route No. 3 was used with lay off from #13 plug the stretch would be 650 but while the #12 plug is a total of two sections to the nozzle inside the building—and is just that much faster. The question is: Has fire apparatus under conditions shown, the right to use route No. 2 and be within their rights or can a local rule interfere and deliberately delay the arrival at a fire of the natural "company first in" due to running distance, when the whole object of the company is to get there quickly and use the expensive equipment that the taxpayers pay to keep down or extinguish fire before it "gets away" and involves the block?

The majority of us feel that we have the right, but as there are a few objections we would like to have your opinion.

In the map shown there occur no lights at all.

P. D. W.

Answer: In the great majority of cities, including the largest in the country, the fire department has right-of-way irrespective of traffic lights. But when crossing a street against a red light, the driver must proceed cautiously, sounding his siren or whistle to warn cross traffic.

There are very few cities in this country where traffic laws are enforced insofar as fire apparatus is concerned. The fire apparatus has the supreme right-of-way in the majority of cities except over federally owned or operated trucks.

Nozzle Pressure and Discharge

To the Editor:

Will you kindly answer the following question?

An engine is to supply two lines of 2½" hose, one 300′ long with a 1¼" nozzle; the other, 200′ long with 1⅛" nozzle. With 175 lbs. at the engine, how much water is being discharged?

C. F. D.

Answer: This problem entails no unusual difficulty, for it is only necessary to solve for nozzle pressure and then for nozzle discharge.

For purposes of identification, we will label the 300′ line of 2½" hose as line A, the 200′ line, as line B.

N. P. in A is found by formula:

$N.P. = E.P. \div (1.1 + K L)$

Where engine pressure is 175 pounds; K for 1¼" nozzle and 2½" hose is .248, and L, the number of 50 foot lengths of hose in the 300 foot line, is 6.

$N.P. = E.P. \div (1.1 + .248 \times 6)$
$= 175 \div (1.1 + 1.488)$
$= 175 \div 2.588 = 67.5\#$

The nozzle pressure in B is found as follows:

$N.P. = E.P. \div (1.1 + K L)$
$= E.P. \div (1.1 + .167 \times 4)$
$= 175 \div (1.1 + .668)$
$= 175 \div 1.768 = 99\#$ approximately.

the discharge from the nozzle on A
$= 30 \times d \times d \times \sqrt{p}$
$= 30 \times 1¼ \times 1¼ \times \sqrt{67.5}$
$= 30 \times 1¼ \times 1¼ \times 8.22$
$= 381$ g.p.m.

Discharge from B $= 30 \times 1⅛ \times 1⅛ \times \sqrt{99}$
$= 30 \times 1⅛ \times 1⅛ \times 9.95$
$= 376$ g.p.m. approximately.

The total discharge from the two lines is then $381 + 376 = 757$ g.p.m.

Pumper Performance

To the Editor:

I will appreciate very much if you will answer the following questions:

With a hydrant pressure of 50 pounds, would it be safe to use 1 or 2 (which and what length) sections of 2½-inch hose from hydrant to 750-gallon pumper? How

many lines could you lay using one and one-eighth nozzle tips, and how much water could you pump before vacuum would form?

S. E. G.

Answer: So many factors enter into this problem you give that it would be impossible to determine a specific answer.

For instance, you may have 50 pounds pressure at your hydrant, but when it begins delivering a flow, the pressure may drop down appreciably, depending upon length and diameter of pipe supplying it, as well as the interior condition of the pipe.

But we can make assumptions. Assume that you wish to get the full capacity of your pumper, 750 gallons, from the hydrant, then it would be safe under ordinary conditions to use two 100-foot lines of 2½ inch hose from the hydrant to the pumper. A pressure of from 40 to 50 pounds on a 1⅛ inch nozzle is satisfactory for ordinary use. On this basis the pumper could supply 3 lines of 2½ inch hose equipped with 1⅛ inch nozzles.

New Waltham Fire Alarm Headquarters

Waltham, Mass., recently placed in service a new fire alarm headquarters which is a model structure with the latest Gamewell equipment.

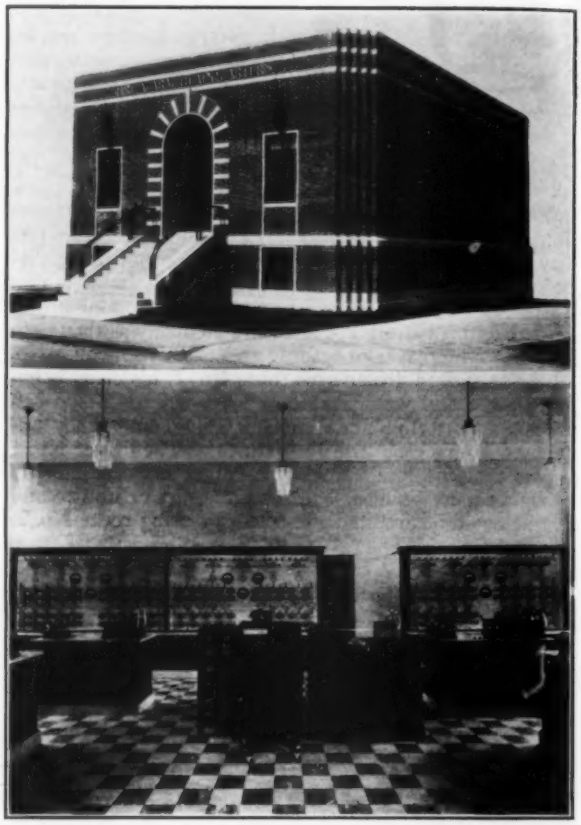
The building is of brick and fire resistive construction throughout. It is situated on Church Street and has the battery and supply room in the basement and the oil heater in a separate section of sub-basement. The first floor contains the large operating room with the switchboards and recording instruments mounted upon panels of blue Vermont marble with frames and pedestals of mahogany finished art metal. The switchboard has eight trunk lines and there are six mutual aid circuits.

Mayor Duane, Chief George L. Johnson, of the Waltham Fire Department, and Inspector of Wires Arthur L. Holbrook are very proud of this new building.

The Waltham fire alarm system was established in 1881, moved to the Moody Street Fire Station in 1891, and was destroyed when this station was burned in 1900. The alarm office was put back in its old location on Spruce Street and in 1903 was moved to the new wire building. About nine years ago replacement of old equipment began and in 1930 the sum of $42,000 was appropriated for a new building and $32,000 to complete the installation of the Gamewell system. There are 230 outside alarm boxes and the new system allows for 500 with provision for expansion of the system to 1,000 boxes.

The alarm equipment was all furnished by the Gamewell Company of Newton, Mass., and is of the very latest type. It consists of three 20-circuit storage battery switchboards, one battery cross connecting and terminal board, one 50-circuit protector board, four 5-circuit box line operating boards, one 4-circuit primary alarm operating board, one 4-circuit secondary alarm operating board, one mutual aid board, one low current alarm outfit, one New England transmitter for primary and secondary circuits, one primary and secondary recording set consisting of two 4-circuit Nonpareil registers, two Excelsior time stamps, two Nonpareil take-up reels; one mutual aid and master recording set; one recording set consisting of one 2-circuit Nonpareil register and one Nonpareil take-up reel; 1,500 cells LCO battery mounted on a metal battery rack, and two 550-volt motor generators.

Over 65,000 feet of wire was used inside the building in connecting up the different pieces of equipment and circuits.



Exterior and Interior Views of the Waltham Fire Alarm Central Office.

A separate transmitter is used for notifying the different stations of the return and dispatch of apparatus.

The building is of brick and steel, the floors being covered with rubber tile.

HARRY BELKNAP.

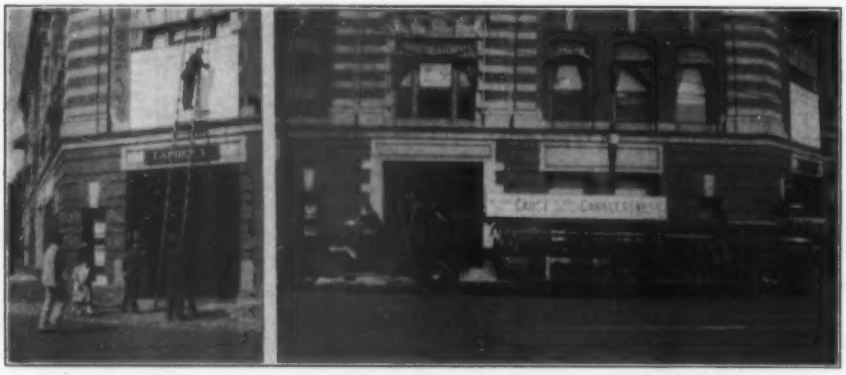
Providence Observes Fire Prevention

A large score board erected in front of Fire Department Headquarters, was used by the Providence Fire Department to drive home the lesson of fire prevention during Fire Prevention Week. On this board was recorded the number of fires each day during Fire Prevention Week for the past five years. Each day at noon, a ladder was raised to the board and the number of fires of the previous day was posted. This novel idea was very well received and attracted a large crowd of interested spectators.

This year during Fire Prevention Week there was a total of thirty-nine fires as compared with seventy-two fires for the year 1930.

Fire Prevention posters were displayed by many merchants and about 40,000 school children took literature home to their parents. A ladder truck was driven through the city each day with a fire prevention slogan.

ROBERT H. WILEY.



Left, Posting the Fire Totals, and Right, the Ladder Truck That Was Driven Through the City Each Day

NEW YORK CITY HAS LARGE RUN OF ELECTION BONFIRES

Two-Platoon System Suspended to Provide More Firemen for Fighting Small Fires and for Patroling the Large Area of the City

By WILLIAM JEROME DALY

ALL is well, at least on the surface, in New York City. The large number of persons who delight in the annual Election Night bonfires to celebrate the election returns have had their fun, and the firemen participated in the greatest epidemic of false alarms and bonfires. This was surprising considering that the past election was an "off year" politically. By that is meant that only a few positions were to be filled and these only for minor offices.

The busiest Election Night bonfire and false alarm epidemic was that which the New York Fire Department and its personnel experienced last week. Although it was politically known as an "off year" which means that but few and minor public offices were being contested, it was anything but an "off night" for the firemen of the Metropolis.

With the unprecedented number of 364 bonfires of record, which means that there were as many more unrecorded, the Fire Alarm Telegraph Bureau of the department handled a total of 1,779 signals for the twenty-four hours period from 8 a. m., November 3, to the same time November 4. The fire alarm key men and the telephone operators had one of the severest ordeals they have encountered in many years. The fire-fighting strength was weakened due to large areas left unprotected for a long time.

The department anticipated that with good weather the New Yorkers would celebrate with their customary bonfires and alarm box pulling. Therefore, Fire Commissioner John J. Dorman declared well in advance that an emergency would exist and he accordingly suspended the two-platoon system from five o'clock in the evening until eleven o'clock at night and all those members due to leave their stations at six were held on until eleven and those due to report at six were required to report an hour ahead of that time.

Further, all engine companies equipped with hose wagon in addition to pumping unit were split into two separate units, the hose wagon only to respond to bonfires and still alarms. In addition to this, double companies with four pieces of apparatus were segregated and located in other parts of the city known for their bonfire activities, this giving the department 120 extra fire fighting units. The increased personnel due to the revocation of the two platoon system for six hours gave the department an additional 1,800 men.

But the precautions and the planning all seemed to be concentrated toward extinguishment rather than the prevention of the building of the fires. Firemen were ordered out on patrol to be accompanied by policemen to prevent possible formations of wood, boxes, barrels, logs, etc. for fuel. The firemen were ordered to wear their leather helmets for the reason that in years gone by firemen have been known to be the targets for hoodlums and other revelers who resent interference with their plans to celebrate the result of the election by making bonfires.

A fireman attached to Engine Co. 31 was pelted with bricks at Canal and Baxter streets when he attempted to scatter a mound of wood all ready for the torch. The first missile knocked his helmet from his head and the second brickbat bounced on his skull, giving him a severe wound which placed him on the sick list. A policeman who was with him drew his pistol. Due to darkness and the fact that the vicinity was surrounded with tenements from which many persons gazing out of windows to watch the bonfire, the policeman did not use his gun.

In the Bronx section of the city there was—there unprecedented—two second alarms and one third alarm within a half hour apart and within two square miles. The third alarm was actually necessitated by the fact that the two previous second alarms had so badly stripped the territory that it became imperative to jump the second line of the running card and resort to the third alarm in order to get a requisite number of fire companies.

The fire alarm dispatchers handled the situation masterfully. There were times when it was necessary to go down the assignment card to the fourth and fifth alarm assignments to get a single company to respond to an ordinary call for a bonfire, such was the number and the extent of the bonfire situation, plus the abnormal run of false calls encouraged by the very convenient "spade handle" or single action door pull which keeps New York City's false alarm record at 35% of the annual total number of fire alarms.

The lumber storage yard of one of the country's foremost piano manufacturers was set afire by boys in quest of lumber for a bonfire. This resulted in a second alarm. This situation prevails year after year and nobody protests excepting the one whose property is damaged, if not destroyed. Twenty-five years ago in New York, one of the charges on which a public works official was removed from office was that he neglected to keep the asphalt pavement of the highway in good repair. He showed by photographs that many of the ruts in the street were caused by Election Night bonfires, but he was removed from office, nevertheless.

Members of the Fire Department accepted the situation gracefully and generally smiled through it all. One of the most important phases of the hazard is the traffic congestion. In some of the rougher neighborhoods, the young men of the district tarred the threads of the fire hydrant before making the bonfire so that the hose would have to be stretched that much longer with consequent delay in extinguishing the fire.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Week Ending October 30	Loss in Thousands of Dollars
MASONVILLE, MICH.—Mill of Bonz Mfg. Co., destroyed	40
MYERS, N. Y.—Plant of International Salt Co., damaged	65
SHERMAN, TEX.—Several business establishments destroyed	80
BELLEVILLE, ILL.—Enameling plant of Karr Range Co.	30
MEMPHIS, TENN.—Property of National Furniture Co.	200
JOHNSON, R. I.—Property owned by United Bond & Mortgage Co.	50
TERRE HAUTE, IND.—Plant of Terre Haute Malleable Co.	35
BALTIMORE, MD.—Plant of Domestic Utilities Co.	40
FLUSHING, N. Y.—Yards of Queensboro Lumber Co.	80
DETROIT, MICH.—Business bldg. at 156 W. Larned St.	125
FORT SCOTT, KAN.—Plant of Ft. Scott Hydraulic Cement Co.	25
DIAZ, ARK.—Property of William Mercantile Co.	30
NEW WESTMINSTER, B. C.—Brown Motors and De Luxe Motors Bldg.	45
BALLARD, WASH.—Plants of Tregoning Boat Co. & Olympic Stone Co.	100
FALMOUTH, ME.—Farm property of Mrs. Martha Whitney	25
SYRACUSE, N. Y.—Globe Hotel and adj. property	30
CARTHAGE, N. C.—Moore Hardware store and Wallace Store	25
AURORA, IND.—Business bldg. owned by Sol Vigran destroyed	30
NEWTOWN SQUARE, PA.—Dairy barn on Austin farm, destroyed	45
PRESQUE ISLE, MICH.—Harbor View Hotel, destroyed	25
SMITHS GROVE, KY.—Four store buildings and contents	45
ZEALANDIA, SASK.—Business section damaged	100
FREEVILLE, N. Y.—Six buildings destroyed	30
PORTAGE, WIS.—Property of P. H. Kantro destroyed	35
ARP, TEX.—Crim Theatre, adj. business property	80
SIOUX CITY, IA.—Business property owned by Spalding estate	25
ELIZABETH, IND.—Business and residential property	45
READING, PA.—Eppihimer & Co. store, adj. bldgs.	250
MEMPHIS, TENN.—Empire Floor & Lumber Corp. property	65
PENETANG, ONT.—Plant of Gidley Boat Co., destroyed	80
Week Ending November 6	
SEMINARY, MISS.—Two business establishments destroyed	25
ARGYLE, N. Y.—Mason's bldg., post office, adj. property	25
CLEVELAND, TENN.—Plant of Southern Cold Storage Co.	35
PORT CARLING, ONT.—Business property including Bank of Nova Scotia	300
DELAWARE WATER GAP, PA.—Kittatinny Hotel destroyed	400
WEST NEW YORK, N. J.—Pier of West Shore Railroad	80
LUMBERTON, N. C.—Lumberton whse. and adj. property	35
ATLANTA, GA.—Plant of Warren Bros. Co. damaged	250
KENNEWICK, WASH.—Plants of De Sota Creamery and Church Grape Juice Co.	60
PHILADELPHIA, PA.—Whse. and stables of Society of St. Vincent de Paul	50
RED BANK, N. J.—Whse. near Headden's Corner owned by Mrs. B. Wolf	25
LANCASTER, N. H.—Farm property of Mrs. Wm. Bross	40
OLD ORCHARD, ME.—Manila House, owned by Samuel Strumbas	25
VALDOSTA, GA.—Barber shop and bakery destroyed	25
WINNIPEG, MAN.—Dart business block destroyed	80
JOLIETTE, QUE.—Business and residential property	45
SAINTE URSULA, QUE.—Whse. store and two residences destroyed destroyed	30
NEW HAVEN, CONN.—Larkin-Carey Lumber Co. whse.	30
MAGEE, MISS.—Plant of Magee Cotton Whse. Co. destroyed	25
PEORIA, ILL.—Store of O'Brien-Jobst Co., damaged	30
MALIBU BEACH, CALIF.—Four cottages destroyed	80
	70

Frank T. Mastin has been appointed Chief of the Fire Department in Russellville, Ala. The City Council has placed an order for new fire apparatus.

The Round Table

(*Continued from page 860*)

are elected), the City Treasurer (who is ex-officio treasturer) and the City Clerk—ex-officio secretary. The benefits are as follows: Full time for sickness or injury, and half pay when pensioned after 20 years of service and 55 years old, or at any time when unfit for service through sickness or injury contracted in the service.

I would suggest that the full amount of one half mill allowed by law be levied until a reserve fund could be built up. Only a fraction of one half mill has been levied so far.

M. M. Tawney, Chief, Harrisburg, Pa.: Employees pay 2% not exceeding $4.00 per month of their salary to maintain the pension fund. The Director of Finance, City Controller and three firemen handle the pension fund. The Firemen's Relief Association here provides the following: $30 per week for sickness or accident on fire duty, $500 death benefits and we also pay medical services and hospital bills.

H. M. Topping, Chief, Whittier, Calif.: We build up our pension fund through the men contributing 1% of their salaries each month and the revenue collected from the yearly entertainments.

The Mayor, Fire Chief, City Attorney and two Trustees elected from the department take care of the pension funds. The benefits derived from this fund are paid upon death of member in service, retirement on account of injuries received in service or upon reaching the age limit.

I believe the city should set aside a percentage of license fees collected each term to aid in keeping up the pension fund.

August G. Derra, Chief, Schenectady, N. Y.: Our pension fund is made up of 3% of the total payroll paid by the city; 1% of the monthly salaries paid by the firemen; all fines for violations of rules and regulations and contributions. The Schenectady Permanent Firemen's Association contributes a certain amount from the proceeds of the Annual Ball.

The fund is controlled by a pension Board, composed of the Mayor, Comptroller, Commissioner of Public Safety, Chief of Bureau of Fire, and one Member of the Permanent Firemen's Association. Benefits are $1,000 in the event of death from any cause, and one half of salary at the time of retirement.

I would suggest that the widow of any fireman killed in the line of duty, be paid a pension of $50 per month until she remarries.

J. F. Sullivan, Chief, Fall River, Mass.: The pensions are given by the city here on the vote of the people for firemen who have attained the age of sixty years and have served in the department for 25 years, or, who have been injured in the line of duty. Retirement is with half pay.

Widows of firemen killed in the line of duty are awarded $1,000 per year with $200 for each dependent child, that is until the child attains the age of sixteen years.

I can suggest no improvement, as the present system could not be bettered under existing conditions.

Elmer J. Brown, Chief, Binghampton, N. Y.: We build up our pension by means of a 2% tax of salaries of members of Bureau of Fire, annual appropriation from city, 2% of foreign fire insurance, and all donations for services rendered by the department.

The Pension Board, consisting of Mayor, City Treasurer, Comptroller, Commissioner of Public Safety, and one member of the department, controls the pension funds.

Members receive a pension of half pay after twenty years consecutive years of service or for total disability. Dependents of deceased members receive a pension not to exceed thirty-five dollars per month.

The fund is satisfactorily maintained and administered under our present laws.

L. R. Morris, Chief, Ames, Iowa.: We have a tax levy which maintains our pension fund. In the case of a fireman being retired on pension for time of service or not able to perform his duty he draws 50% of his wages he was getting when he retired. In case of his death, his widow receives $40 per month and for each child under 16 years, $8 per month as long as she remains a widow.

I have no suggestion to offer for improvement of our present methods.

H. A. Whitney, Chief, Adrian, Mich.: We have at the present time no pension fund, although from time to time considerable discussion has been given to the subject. We do have a relief fund, however, kept up by an annual dance.

J. H. Harrison, Chief, Brunswick, Ga.: We do not have a pension fund. The Georgia legislature passed a bill last year giving the city authority to pension firemen on half pay after 20 years continuous service.

W. O. Matthews, Chief, Bozeman, Mont.: We maintain our pension fund by the state tax on fire insurance premiums, a city tax of 1/10 mill on real estate, donations to the Fire Department and interest on investments.

It is administered by the Fire Department Relief Association, under State Law Supervision. The benefits paid are disability benefit, funeral benefit and pensions.

I recommend that relief funds be used only for pensions and death benefits, and that accidents be taken care of by blanket accident insurance covering volunteers, this being permitted by State Law. This recommendation is for the protection of funds for use in paying pensions.

Louis Behrens, Chief, Charleston, S. C.: 1% from firemen's salaries and 1% from each $100 of insurance issued in this city by fire insurance companies is used to maintain our pension fund.

The pension fund is administered by a Board of Trustees composed of five members, Chairman Board Fire Masters, Chief Fire Department, City Treasurer, one man appointed by the Mayor, and one man appointed by the Chief of Department. Our pension regulations are: 15 years service, 1/3 of members salary as pension, 25 years service, ½ of members salary as pension.

B. J. Reilly, Chief, Ithaca, N. Y.: We have no pension fund of our own. All employees are members of the New York State Employees' Retirement System. We have, however, a Relief Fund of our own, accumulated from a 2% tax on foreign insurance companies. This fund is used to aid sick and indigent employees.

Edward Ramie, Chief, Ogdensburg, N. Y.: We have no pen-

On the Good Ship "Scythia," Enroute to Havana

Left to right: Battalion Chief Thomas F. O'Connor, Washington, D. C. and Mrs. O'Connor; Chief J. N. Longval, Shawinigan Falls, Quebec; Chief Geo. Sinclair, Toronto, Ont.; Chief W. T. James, Hamilton, Ont.; Chief D. A. Boulden, Winnipeg, Manitoba; Chief Raoul Gauthier, Montreal, Que.; Mr. and Mrs. W. W. Withers, American-La France Industries, Washington, D. C.

Members and Guests Assembled at the 33rd Annual Convention of the Dominion Association of Fire Chiefs, Held Recently at Shawinigan Falls, Quebec

sion fund here. We have the State Retirement System and it is handled by the State Comptroller's Office.

Richard Kelley, Chief, Davenport, Iowa: We maintain our pension fund by taxing the firemen 1% of their monthly wages and by the initiation fee of $5.00 for new members entering the department. All donations received go to the Relief Fund and every other year we hold a dance the proceeds of which goes to this fund.

This fund is administered by the Chief as President, City Treasurer as Treasurer, and City Attorney on the Board of Trustees.

The benefits are as follows:

½ pay after 22 years of service at 50 years of age.

½ pay if injured while on duty, or off duty after 5 years of service.

Widows pension of $30 per month and 8 dollars per month to each surviving child under 16 years of age.

If sick or injured one dollar per day out of the relief fund for 13 weeks besides regular pay and $300 death benefit out of the relief fund.

I would suggest having baseball games, dances, etc., to help build up the relief fund.

John L. Lucier, Chief, Northampton, Mass.: We maintain our relief funds by running dances, entertainments, and money that we receive from people who give in appreciation of work done at fires. We also invest all money in first mortgages at 6 per cent interest.

The Board of Trustees controls the relief funds. The following quoted from the constitution and by-laws of our organization explains the benefits:

"To the relief of any member of this Association (Northampton's Firemen's Relief Association) who shall, in the discharge of any duties connected with the Fire Department in any way, have received such injury to his health or limbs as shall render him, in the judgment of the Board of Trustees, a proper subject for assistance.

"To defraying the funeral expenses, and the assistance of the widow or orphans (if he shall leave such) of any member of this Association, whose death may have resulted from injuries (as noted above) provided, that the family or representatives of the deceased shall be in indigent circumstances, or that such appropriation of the fund appear a proper one to the Board of Trustees.

Training Volunteer Firemen

(*Continued from page* 854)

great deal of time. Firemen should be taught to take care of themselves when they are risking their lives to save others. People scoff at the idea of first aid but a practical experience will convince the most skeptical this subject must not be overlooked.

A fireman, in the performance of his duties, was overcome by carbon-monoxide fumes. Artificial respiration was applied forty-five minutes before the patient showed any sign of breathing. The chief was criticized when he refused to give the patient over to hospital attaches. Having faith in artificial respiration taught by an experienced first aid man, the lessons were put into practice and today the fireman is well, in good health, and is performing the duties of the Instructor of the Harrisburg Fire School in a very masterly way. We have in the department two instructors who have completed the American Red Cross School course. These men give the first aid instructions in our Fire School. We insist on five items which the student must know and demonstrate. Male Lift, Female Lift, Three-Man Carry, points at which to stop the flow of blood, and artificial respiration.

You owe it to your community to give it the best fire service possible and the community owes it to you to help make that kind of service possible. The educational program is available and you must take advantage of this golden opportunity. Eleven States have already passed bills appropriating moneys to fire colleges and it is hoped that Pennsylvania will soon join the ranks of those who have already subscribed to this great work of conservation and preservation of America's resources.

Men must be trained to meet the emergency. The fire school is the proper place for this education for Fire Department work and all moneys expended and efforts put forth are for the benefit of the citizens of the community.

Chief J. H. Speddy of Lakewood, Dead

Joseph H. Speddy, head of the Fire Department in Lakewood, Ohio, and a member of the department since August 12, 1912, died November 7 in the Lakewood Hospital. He had been in ill health since August and underwent an operation at the Cleveland Clinic last month. He returned to his home several weeks later but a short time ago was removed to the Lakewood Hospital.

The Late Chief Joseph H. Speddy

Before going to Lakewood, Chief Speddy was President and General Manager of the Lake Transportation Company and he was head of the Fire Department of the Standard Oil Company plant No. 1 on Broadway.

He was an ardent believer in the good of fire prevention. He was successful, last year, in winning the grand prize for Lakewood, in the fire waste contest of the U. S. Chamber of Commerce. For two previous years, Lakewood won first prize in its class.

Chief Speddy was active in the Ohio State Fire Chiefs' Association and was prominent in the affairs of the International Association of Fire Chiefs.

Chief James E. Granger of the Cleveland Fire Department said: "Chief Speddy was recognized as an authority on fire control and fire prevention. I was associated with him for thirty years and he was always very well liked."

Chief Speddy is survived by his widow, and four sisters. He was a member of the Masons and the Elks.

Great Falls Mont., has purchased an aerial ladder truck. This will enable the firemen to reach points fifteen feet higher than with the present equipment.

As part of Fire Prevention Week in Saint John, N. B., a local newspaper ran a special two-page section calling attention to fire hazards.

Two firemen of Des Moines Ia., were injured when the apparatus on which they were riding to a fire, crashed into a parked car. The accident was caused by the breaking of a steering knuckle.

Photo courtesy National Tours, Inc.

No, Not of the "Scythia's" Staff

They're none other than Chief J. W. McCarthy, Corning, N. Y., (left) and Chief August Derra, Schenectady, N. Y., (right).

Prize Winning Masqueraders on Board The S. S. Scythia

Three of the Chief's party carried off cups: George J. Richardson, Secretary-Treasurer, International Association of Fire Fighters, knocked off first prize with his excellent portrayal of Gandhi. George is shown down in front of the group. Chief William Zeigler, Hackensack, N. J., (third from the left of rear row) and Paxton Mendelssohn, Detroit fire fan (at extreme right of rear row) also won cups.

Those Who Attended the International Chiefs' Convention at Havana, Cuba

FOLLOWING is a list of the active and associate members who attended the fifty-ninth annual convention of the International Association of Fire Chiefs, held at the Plaza Hotel, Havana, Cuba, on October 14 to 17:

ACTIVE MEMBERS

(Chiefs unless otherwise specified)

ALABAMA

J. L. Akin, Birmingham.
C. L. Ingram, Montgomery.

CALIFORNIA

Louis Almgren, San Diego.
E. F. Coop, Pasadena.
C. M. Hirschey, Hillsborough.
W. E. Parker, Monterey.
Ralph J. Scott, Los Angeles.
Jay W. Stevens, Ex-Chief, San Francisco.

CONNECTICUT

Geo. Bogardus, Norwalk.
Thos. F. Burns, Bridgeport.
L. L. Lamphere, Naugatuck.
John C. Moran, Hartford.

CUBA

A. Lagueruela, Havana.
Jose F. Mayato, Havana.
Leopoldo D. Villegas, Ex-Chief, Havana.

FLORIDA

Wm. R. Anderson, Ft. Myers.
Steve Edwards, Quincy.
T. W. Haney, Ex-Chief, Jacksonville.
J. T. McNulty, St. Petersburg.
F. C. Pfaender, Winter Haven.
D. E. Sox, Coral Gables.
Walter Sachre, Winter Park.
C. P. Townsend, St. Augustine.

GEORGIA

E. F. Beville, Gainesville.
D. W. Brosnan, Albany.
John B. Kennedy, Augusta.
E. W. Kidd, Newman.
Monte McEachern, Columbus.
John H. Monroe, Savannah.
H. B. Rich, Bainbridge.
H. L. Taylor, Rome.

ILLINOIS

A. N. Hofstetter, Evanston.
G. M. Houren, Winnetka.
Geo. E. Koeber, Bloomfield.
Frank C. McAuliffe, Chief Patrol, Chicago.
L. F. Mitchell, Danville.
P. E. Piercey, Quincy.
Walter H. Zibble, Wilmette.

INDIANA

J. I. Fetters, Mishawaka.
Wilber Keen, La Fayette.
R. A. Knoblock, South Bend.
John C. Loucks, Ex-Chief, Indianapolis.
Harry E. Voshell, Indianapolis.
Ward A. Wantz, Anderson.

IOWA

Geo. M. Kellogg, Sioux City.

KENTUCKY

C. J. Henry, Lexington.

LOUISIANA

R. A. Bogan, Baton Rouge.
A. O. Eastman, Jennings.
John M. Evans, New Orleans.

MAINE

Oliver T. Sanborn, Portland.

MANITOBA

D. A. Boulden, Winnipeg.

MASSACHUSETTS

Selden R. Allen, Brookline.
W. H. H. Atkins, Ex-Chief, Marblehead.
Fred C. Blossom, Ex-Chief, Cohasset.
Fred A. Clark, Attleboro.
George F. Cobb, Traffic Manager, N.E.F.C.A., Boston.
Joseph A Cribby, Somerville.
Edw. F. Dahill, New Bedford.
John N. Damon, Ex-Chief, Milford.
Samuel Daoust, Marlboro.
David H. DeCourey, Winchester.
Frank F. Dickinson, Brockton.
A. G. Fisher, Ambridge.
P. E. Ham, Everett.
A. Howard Fiske, Ex-Chief, Framingham.
Henry A. Fox, Boston.
Geo. L. Johnson, Waltham.
Mellen R. Joy, Saugus.
Wm. H. Hill, Belmont.
Henry J. Harrigan, Dedham.
Patrick J. Hurley, Holyoke.
Henry T. Hyatt, Fitchburg.
H. E. King, Ex-Chief, Mansfield.
C. L. McCarthy, Worcester.
Michael McPhee, Lawrence.
Thomas H. Mahoney, Westfield.
Manuel Miguel, Manchester.
Arthur Montmeny, Chicopee.
J. H. Neary, Natick.
J. W. O'Hearn, Watertown.
W. C. Shepard, Pittsfield.
James C. Sullivan, Lowell.
Arthur E. Soper, Mansfield.
John E. Sullivan, Ex-Chief, Plymouth.
I. L. Symmes, Ex-Chief, Winchester.
Edward P. Taylor, Lexington.
Daniel B. Tierney, Arlington.
Frank E. Tracy, Woburn.
Robert M. Tappin, Gardner.
Peter E. Walsh, Ex-Chief, Boston.
Ray D. Wells, Falmouth.

MICHIGAN

N. Belfy, Muskegon.
Hugo R. Delfs, Lansing.
S. J. DeMay, Detroit.
R. E. Mottesheard, Dearborn.

MINNESOTA

Owen C. Dunn, St. Paul.
Chas. McIlhargey, Hibbing.
N. F. Quist, Virginia.

MISSISSIPPI

L. F. McDonald, Jackson.

MISSOURI

Wm. H. Gardner, Chief Patrols, Kansas City.
Jas. T. O'Donnell, St. Louis.

NEW HAMPSHIRE

Albert C. Delendy, Nashua.
Chas. H. French, Manchester.
W. C. Green, Concord.
F. M. Sargent, Sunapee.

NEW JERSEY

Harry J. Becker, South Orange.
Ernest G. Beckert, West New York.
Clarence H. Bender, Summit.
Harry Bennett, Long Branch.
H. F. Blancke, Ex-Chief, Linden.
R. H. Bowker, Passaic.
Roger Boyle, Jersey City.
Andrew T. Callahan, Harrison.
Harvey Campbell, Irvington.
Peter B. Carter, Ex-Chief, Camden.
Albert Chamberlain, Hillside.
Fred C. Decker, Westfield.
Chas. R. Dietz, Audubon.
W. J. Dunn, Plainfield.
Aug. Gerstung, Ex-Chief, Elizabeth.
Jethro Gibbs, Montclair.
Elmer Hewitt, North Wildwood.
Wm. F. Ingold, Edgewater.
James T. Keegan, Newark.
William H. Kenah, Elizabeth.
M. F. Kennedy, West Orange.
C. A. McGinley, East Orange.
Wm. S. McLoughlin, Bayonne.
James J. McMillan, Orange.
Thos. H. Mead, Red Bank.
Charles E. Miller, Jr., Margate City.
Geo. L. Mitchell, Ex-Chief, East Orange.
Chas. L. Mickerson, Wildwood.
William F. O'Neill, Weehawken.
K. F. Pierce, Kearny.
Oliver B. Presley, Ex-Chief, Long Branch.
K. V. Ridley, Teaneck.
W. S. Taggart, Asbury Park.
John J. Towey, Newark.
Joseph K. Weber, Stone Harbor.
John Zanet, Clifton.
Wm. Ziegler, Hackensack.

NEW YORK

Philip Baker, Ex-Chief, Port Chester.
H. C. Bartlett, Oxford.
C. J. Beatty, Jamestown.
Geo. W. Booth, Chief Engr., N.B.F.U.
Henry Boss, Sparkill.
Geo. M. Bower, Rome.
John J. Brennan, Pelham Manor.
L. C. Brookins, Norwich.
Elmer Brown, Binghamton.
I. H. Case, Gen. Mgr., FIRE ENGINEERING, N. Y. C.
W. T. Champ, Sherbourne.
Wm. J. Creegan, Rochester.
A. G. Derra, Schenectady.
John H. Epsey, Elmira.
W. J. Gates, Glen Falls.
John Gibson, Mount Vernon.
E. W. Gieselman, Syracuse.
Geo. Hedden, Buffalo.
Chas. Higham, Ex-Chief, Middletown.
Chas. Huger, Endicott.
C. H. Lawton, Greene.
A. H. Lyon, Ex-Chief, Binghamton.
John W. McCarthy, Corning.
Geo. Maier, Long Beach.
R. A. Maxson, Gloversville.
James J. Mulcahey, Yonkers.
William Nixon, Ex-Chief, Newburgh.
Chris. W. Noll, Poughkeepsie.
W. M. Seeley, Middletown.
Fred. Shepperd, Headquarters Mgr., I.A.F.C., N. Y. C.
H. A. Spencer, Sidney.
I. N. Sullivan, Utica.
Frank D. Warner, New Berlin.
Geo. A. Wood, Niagara Falls.

NORTH CAROLINA

W. A. Brown, Salisbury.
S. S. Bryan, Ex-Chief, New Bern.
A. L. Duckett, Asheville.
A. B. Horney, High Point.

Alfred A. Kafer, Jr., New Bern.
A. W. Jowdy, Ex-Chief, New Bern.
Jno. L. Miller, Concord.
Chas. Schnibben, Wilmington.
Frank D. Shaw, Greensboro.
D. E. Shuford, Hickory.
J. C. Taylor, Kannapolis.
C. L. Westmoreland, Canton.

ONTARIO

Joseph Fowler, Ex-Chief, Sudbury.
W. T. James, Hamilton.
Geo. Sinclair, Toronto.

PANAMA

Juan Antonio Guizado, Panama.
Max Walker, Colon.

PENNSYLVANIA

Chas. E. Clark, Ex-Chief, Wayne, Pa.
M. E. Clark, Williamsport.
Frank Deen, Lancaster.
Samuel H. Jeffries, Wilkinsburg.
M. P. Leonard, Erie.
Edmund B. Lewis, Scranton.
Chas. Smalenberger, Meadville.
Richard Lee Smith, Pittsburgh.

QUEBEC

Raoul Gauthier, Montreal.
J. W. Longval, Shawinigan Falls.

RHODE ISLAND

Thomas Almond, Central Falls.
Frank Charlesworth, Providence.
A. J. Cote, Woonsocket.
Joseph S. Lawton, Newport.
Irving F. Patt, Ex-Chief, Central Falls.
John A. Savage, Valley Falls.

SOUTH CAROLINA

Louis Behrens, Charleston.
H. B. Wells, Newberry.

SOUTH DAKOTA

Wm. A. Sloan, Sioux Falls.

TENNESSEE

Glenn Huffstetler.
C. M. Johnson, Knoxville.
Robt. Jones, Chattanooga.
John T. Moore, Memphis.
T. B. Moore, Nashville.

TEXAS

E. V. Esterling, Ex-Chief, Del Rio.
S. Ferguson, Ft. Worth.
W. J. Springer, Texarkana.

VIRGINIA

James M. Duncan, Jr., Alexandria.

WEST VIRGINIA

Ralph F. Doolittle, Fairmont.

WISCONSIN

Peter Steinkellner, Milwaukee.

ASSOCIATE MEMBERS

CALIFORNIA

M. Malmstrom, Dep. Chief, Long Beach.
D. C. Fenner, Mgr., Los Angeles.
R. S. J. Garden, Los Angeles.
Fred. S. Hirsch, Hon. Bat. Chief, Los Angeles.
H. E. Strasser, Bat. Ch., San Diego.
J. C. Baly, Asst. Ch., San Pedro.

CUBA

E. F. Mirabel, Asst. Ch., Havana.

DISTRICT OF COLUMBIA

Frank Cushman, Chief, F.B.V.E., Washington.
Thos. F. O'Connor, Bat. Ch., Washington.
John M. O'Neill, Washington.
George J. Richardson, I.A.F.F., Washington.
W. W. Withers, Washington.

GEORGIA

Geo. H. Coates, Fulton Bag Co., Atlanta.
G. L. Huggins, Thomasville.
H. B. Marbury, Fulton Bag Co., Atlanta.
Roy Timmerman, Atlanta.

ILLINOIS

Rev. John F. Coleman, Fire Ins. Chaplain, Chicago.
Louis A. Lehr, Seagrave Corp., Chicago.

INDIANA

John B. Hudson, Mayor, Lafayette.
John H. Kluth, Chief of Police, Lafayette.

KENTUCKY

M. H. Collins, Rensselaer Valve Co., Louisville.

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Lawrence Carolan, Jr., Chelsea.
Harry Carlow, Taunton.
John P. Crowe, Dep. Fire Warden, Westboro.
John J. Doherty, Lowell.
Justin A. McCarthy, Boston.
James E. Moloy, Dist. Fire Warden, Woburn.
Earle E. Moulton, Worcester.
Geo. H. Reed, Ex-Asst. Chief, Marblehead.
Charles W. Stacey, Ex-Captain, Marblehead.
Burton Steere, Dist. Chief, Springfield.
Frank E. Taft, Cohasset.
Hubert W. Tracy, Boston.
L. L. Walden, Supt., Worcester.
Joe Webber, American-LaFrance, Boston.
E. E. Williamson, Supt. of Maint., Boston.

MICHIGAN

Paxton Mendelssohn, Chm. F. P. Comm., Detroit.
Edw. C. Rumsey, Chief of Apparatus, Detroit.

MISSISSIPPI

F. L. Boteler, Captain, Jackson.

NEW HAMPSHIRE

Frank J. Abbott, Manchester.

NEW JERSEY

Emil A. Bacha, Dept. Pub. Safety, Perth Amboy.
Thos. C. Brasch, Comm. Pub. Safety, Red Bank.
Chas. S. Chandler, Fire Commr., Elizabeth.
Aug. Kaczmarek, Commr., Elizabeth.
Chas. E. Korn, Lieut., Elizabeth.
M. C. Murphy, Commr., Kearny.
Arthur Olson, Commr., Oradell.
Louis Quien, Jr., Dep. Engr., Elizabeth.
J. Reuter, Comm., Elizabeth.
Wm. F. Siebert, Maplewood.
Louis J. Seitz, Elizabeth.
John J. Sweeney, Deputy Chief, Jersey City.
J. A. Van Schoick, Jr., Fire Commr., Red Bank.
Dr. Otto Wagner, Fire Commr., Hackensack.

NEW YORK

Otto F. Beutell, New York City.
R. G. Browning, New York City.
Thos. Bryden, New York City.
Jesse Chantler, Asst. Chief, Sherburne.
John J. DeLaney, American-LaFrance, New York.
Wm. H. Gragen, Civil Serv. Comm., Rochester.
Jos. H. Green, Eureka Fire Hose Mfg. Co., New York City.
Wm. Hansman, Poughkeepsie.
Henry Koenig, Poughkeepsie.
Kenneth McPhee, New York City.
J. J. McElligott, Asst. Chief, New York City.
Fred G. Merkle, Fire Commr., Mt. Vernon.
D. S. Mersereau, Endicott.
Thos. J. O'Toole, Capt., New York City.
Wm. J. Tingwood, Fire Commr., Poughkeepsie.
John J. Spencer, Bat. Ch., New York City.
A. G. Sullivan, American-LaFrance, New York City.
P. N. Thoren, Dept. Commr., Mt. Vernon.
H. J. Treacy, Chief, Bur. Repairs and Supplies, N. Y. C.
F. R. Van Rensselaer, American-LaFrance & Foamite, Elmira.
W. Vogel, Middletown.

NORTH CAROLINA

Henry Holden, Bessemer City.
V. A. Lauderman, Bessemer.
R. T. Sherrill, Hickory.
R. Trevarthen, Bessemer City.
W. D. Williams, Hickory.

OHIO

Daniel Bailey, Cincinnati.
David McGraw, Engr., Youngstown.
L. G. Schraffenberger, Bat. Ch., Cincinnati.
Lester Stevenson, Seagrave Corp., Columbus.

ONTARIO

I. R. Beamish, Commr., Toronto.
G. L. Nelson, Commr., Hamilton.
George Thomas, Mgr., Toronto.

PANAMA

M. DeCastro, Cap., Panama.

PENNSYLVANIA

Herbert Detwiler, York.
Peter J. Cavanaugh, Philadelphia.
Louis J. Conley, Pittsburgh.

QUEBEC

Albert Gigoire, Mayor, Shawinigan Falls.
J. Veelleux, Alderman, Shawinigan Falls.

RHODE ISLAND

John S. Coggeshall, Newport.
Everett I. Pratt, Lieut., Central Falls.
R. E. Peck, 1st Asst. Chief, Watch Hill.
T. M. Stenholm, Newport.
D. D. Syme, Newport.

SOUTH CAROLINA

M. F. Schnibben, Florence.

TENNESSEE

T. H. Fitzsimmons, Capt., Memphis.
R. B. Burns, Capt., Memphis.
B. G. Mattingly, Capt., Nashville.
C. A. Rakistran, Capt., Chattanooga.

TEXAS

Olin Culberson, Edna.
Chas. F. Maulen, Mgr., Dallas.

VERMONT

Edwin D. Moore, Bennington.

VIRGINIA

Richard M. Green, Jr., Alexandria.
John F. Raffo, Asst. Chief, Richmond.

WEST VIRGINIA

M. E. Ashcroft, Commr., Fairmont.

WISCONSIN

D. J. Corcoran, Supt. of Mach'y, Milwaukee.

New Headquarters for Staten Island

Commissioner John J. Dorman of the New York Fire Department has submitted to the Building Bureau, plans for a $150,000 fire alarm and telegraph building to be erected in Silver Lake Park, Staten Island, near the reservoir. Mr. Dorman said that with the construction of this building, Staten Island will have the most modern fire alarm system in the country.

The building will be constructed of brick and will be one story high, topped by a huge dome. Special attention was given to the building design so that it would harmonize with the structures within the vicinity. Shrubbery planted around the contemplated building, to beautify the grounds, will cost from $5,000 to $8,000. The house will be 126 feet long by 25 feet wide.

Originally it was planned to place the central station in Cloves Lakes Park, but Commissioner Dorman found that it would cost $57,000 additional to continue the main cable from Forest Avenue.

Firemen of Ellsworth, Wis., are considering the purchase of fire apparatus provided with a booster pump for use at fires within and outside of the village.

The Village Board of Rockton, Wis., has ordered Pirsch apparatus. It is expected that the apparatus will be delivered in about three months.

More Views of the I. A. F. C. Convention in Havana

Left, the farewell greeting to the American Chiefs and visitors as they left Havana, Cuba, to return to the United States. Center group, left to right, William H. Gardner, Chief of Fire Patrols, Kansas City; James T. O'Donnell, Chief, St. Louis Salvage Corps, and Chief William A. Sloan, Sioux Falls, S. D. Right, bunk room of No. 2 Station, Havana, which is next to the Plaza Hotel where many of the Chiefs registered.

FIRE DEPARTMENT ACTIVITIES

Chief Charles Schnibben of Wilmington, N. C., opened the new Fire Station No. 4.

The Fire Department of Avalon, N. J., has ordered Hahn fire apparatus after raising funds for the past two years.

The Fire Department of Fontana, Wis., has moved into its new building.

William H. Drury, a paid fireman of Hartsdale, N. Y., has been appointed its first paid Fire Chief.

Benwood, W. Va., has contracted for the installation of a Gamewell fire alarm system.

Amherst, Ohio, is considering a bond issue to finance the purchase of new fire apparatus.

The City Council of Fond du Lac, Wis., has authorized the purchase of an eight-cylinder automobile for Chief Russell.

The State of Iowa may aid Eldorado in the purchase of new fire apparatus to be used jointly by the State Board or the Council.

Cambridge, Md., has received a new 1,000-gallon pumper equipped with a 100-gallon booster tank. It is the V-12 American-LaFrance model.

The request of Chief Robert L. Laing of Seattle, Wash., for a pumper was approved by the Board of Public Works. The apparatus will have a capacity of 1,000 gallons per minute.

The Volunteer Fire Department of Elkville, Ill., has com-pleted payments on its fire apparatus. Funds were collected through the aid of local entertainments and suppers.

Bids were opened in Galveston, Tex., for the construction of a new fire station, and for the sale of the present fire station on the site where the new house will be erected.

Albert H. Luck, for many years Fire Chief in Waupun, Wis., and former President of the Dodge County Firemen's Association, died at his home at the age of fifty years.

Davenport, Ia., is annoyed over an epidemic of false alarms. Chief Kelly has conferred with the Chief of Police to see if the ones guilty can be apprehended and punished.

Chief J. S. Stephensen has been reinstated by the City Council of Miami Beach, Fla., to his post as head of the Fire Department.

Retail merchants of Dubuque, Ia., have protested against the proposed ordinance of the City Council that would prohibit the sale of fireworks. The objectors stated that the city has had no appreciable Fourth of July fire loss.

The City Council of Alliance, Ohio, voted to purchase new fire apparatus not to cost over $12,000. For two months the city council has been deadlocked over the question of fire apparatus.

Gamewell Exhibit at the Convention of Municipal Electricians in Jacksonville, Fla.

The 3-Fold box was displayed at the convention of the International Association of Municipal Electricians held at the Hotel Mayflower, Jacksonville, Fla., October 27-30. The photograph above shows a section of the Gamewell 3-Fold system that was on display and shows the new 3-Fold switchboard, one old style and five new 3-Fold fire alarm boxes connected to two box circuits, and an engine recording set. The switchboard includes two box line panels, one primary alarm panel, one secondary alarm panel and one local alarm panel. A special room was reserved for the display and the apparatus was demonstrated by E. J. McCarthy of the Boston and G. A. Jackson of the New York office.

An American Legion post of Mellen, Wis., voted to form a forest fire fighting unit to be held in readiness for emergency calls. It is said that many of the Legion posts in the northern part of the state are organizing such units.

An Arson Squad has been formed in Cleveland, Ohio, to counteract the increase in the number of incendiary fires. Lieut. Patrick Ferrie will be in charge of the squad consisting of five or six men.

Roseland, N. J., is considering an ordinance which would give the Council the power to appoint a permanent Chief for the Fire Department. At present the firemen elect the officers.

Ottawa, Ill., has adopted a new fire ordinance which en-larges the present fire limits and provides that all new buildings in the district, as well as new roofs placed on old buildings, must be of fire-resisting materials.

At a meeting held in Frederick, Md., the men discussed the formation of a volunteer firemen's association for Frederick County. It is said that several such district associations have been formed recently in Maryland.

One fireman was critically injured when a Buffalo, N. Y., pumper answering a false alarm collided with an auto. He was riding on the rear of the apparatus and was thrown off by the impact. The other firemen were badly shaken but were uninjured.

The Mayor of San Diego, Cal., is investigating the plan to place the Fire Department under a Board of Commissioners. Responsibility for the Fire Department now rests with the council and it is said to be problematical if the Council would consent to have this responsibility shifted.

The Mayor of Austin, Minn., has ordered that the police arrest every motorist who approaches within three hundred feet of fire apparatus that is on its way to a fire. A policeman will respond to every fire to watch for violators of the traffic rule.

The Walworth County Fire Officers' Association has been formed at a meeting held under the auspices of the Delavan, Wis., Fire Department. Chief C. V. Bachelle, of Delavan Lake, was elected President and Chief Henry Heyer, of Darien, Secretary.

William F. Wise, for twenty years Chief of the Medina, Ohio, Fire Department, died at his home, at the age of forty-eight. He was also Deputy State Fire Marshal until the recent change in state politics. Chief Wise is survived by widow and an adopted son.

Ludington, Mich., voted to charge a minimum fee of fifty dollars for runs to rural fires, chargeable to the township. For every run of more than five miles, there will be an extra charge of ten dollars a mile and twenty-five dollars an hour for each hour after the first hour of service.

Funds are being collected in Winlock, Wash., for the pur-chase of special apparatus for the protection of rural property. While the apparatus will belong to the farmers, it will be maintained by the town of Winlock and operated by the Winlock Fire Department.

Burlingame, Cal., was threatened with a strike of volunteer firemen. As a means of offsetting this step, the Council voted to discharge the group of striking firemen and to tie up their funds. The firemen protested the reinstatement by the Council of a fireman who had been discharged by Chief Dessin.

A member of the City Council of Detroit, Mich., has pre-sented a plan to shut the Fire Department Training School and to use the men that will thus be made available to man a fire station that has been idle since it was erected in April. The Councilman said that the Detroit firemen were veterans and did not need training at present.

The Council of Putnam, Conn., has authorized a policy to protect firemen against accident and loss of life. It will be substituted for an old form of insurance which gave firemen a five-dollar weekly compensation in case of accident but did not provide for the payment of a lump sum in case of death.

Reduce WATER DAMAGE & INSURANCE RATES with

Shuredry SALVAGE COVERS

"Back in May of last year, after having heard so much about salvage work by the fire department, and after having given considerable thought to the fact that three times as much damage is done at fires by water as by flames, I decided to introduce salvage work in my department, and immediately purchased several of your No. 2 SHUREDRY GREEN-BAK salvage covers, size 12' x 18'.

"Since that time, we have saved from water damage thousands of dollars worth of valuable merchandise and household effects for the citizens of Johnson City, and I am so thoroughly sold on salvage work today, and on your SHUREDRY salvage covers, that I would not sell the covers now for $100.00 apiece if I could not buy more to replace them. What I want to do is to add more covers and save more goods from water damage, because this will enable me to make a better showing at the end of the year by reducing my annual fire-loss report.

"I cannot too strongly recommend salvage work and SHUREDRY salvage covers to the other fire chiefs of this country."

W. E. Raley *Chief, Johnson City, Tenn., Fire Dept.*

75% of the nation's annual half-billion-dollar fire loss is traceable to Water Damage. Send for Shuredry samples today.

Fulton Bag & Cotton Mills

Manufacturers Since 1870

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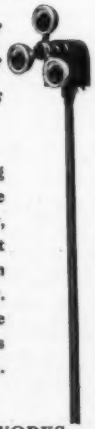
"ROTO-RAYS" instantly identify your apparatus



ROTO-RAYS JR. is now available for chiefs' cars, ambulances, Police Dept. Vehicles and the smaller types of fire apparatus

An absolutely distinctive signal identifying your apparatus at night. "Roto-Rays" — three revolving red lights—is seen many blocks away, even in congested traffic, and gets you the right of way. There's no mistaking "Roto-Rays," an inexpensive protection of life and property. "Roto-Rays" and a Buckeye Whistle make the most effective combination of warning signals in existence. Write for complete information.

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324 E. Third Street Dayton, Ohio

BUCKEYE
WARNING SIGNALS THAT WARN

NOW—a Barton on the Chief's Car

GLANCE over the record of your call thus far in 1931. How many were severe fires which really demanded the use of your big, high-priced pumpers? Very few, we venture to say.

That's why it's so economical to have one of our Barton Junior Fire Pumps installed on your chief's car. This small centrifugal pump is all you need for combating at least nine out of every ten fires that occur, saving entirely the heavy expense of placing your large apparatus in action.

This small Barton Junior delivers 75 g.p.m. at pressures up to 200 pounds. It will pump clean or dirty water from any source—city main, booster tank, lake, stream, cistern or muddy slough. It is front mounted as shown above, and can be easily installed on any car now in service, or on any new car you contemplate buying. It is built to stand toughest going—study, rugged and sound—at a price unusually low.

A Barton Junior will save far more than its cost the first year in service. Very definitely will it pay you to write us for full details.

If you are also interested in the larger 300 and 500 Gallon Barton Fire Pumps, which have passed the Underwriters' 12-hour Tests, ask for Bulletin 60 shown at left. AMERICAN STEAM PUMP COMPANY, Battle Creek, Michigan.

BARTON
FIRE PUMPS

PROPOSED IMPROVEMENTS

La Crosse, Wis.—Sum of $12,500 included in 1932 budget for purchase of pumper for fire department. F. G. McGlachin, Chief.

Sheboygan, Wis.—Fire Chief Charles W. Brandt requested that funds be included in budget for new pumper for industrial sections, additional fire hose and other equipment.

South Bend, Ind.—Ordinance for appropriation of $500,000 sale of bonds was introduced at recent City Council meeting, according to reports. Part of this to be used for purchase of new equipment for fire department.

Alliance, Ohio—Ordinance passed providing for issuance of bonds to the amount of $12,500 for purchase of fire apparatus. Harry S. Wykoff, City Solicitor.

Lodi, N. J.—Village Council recently passed ordinance authorizing bond sale to the amount of $4,000 for purchase of pumper for fire department, according to reports.

Scio, Ore.—Fire department raising funds for purchase of fire apparatus and other necessary equipment.

Wanted
Sales Representatives

Calling on Fire Chiefs and large Industrials to represent us selling Ecolite Electric Lanterns. Good profits, no selling resistance. Give references and lines now handled. ECONOMY ELECTRIC LANTERN CO., 325 W. Huron, Chicago.
11-11, 25

TO EXTEND CHIEFS' EMERGENCY PLAN INTO CONNECTICUT

New York Organization of Chiefs Suggests Formation of Subsidiary Plan in Sister State—Good Meeting at Peekskill

TENTATIVE suggestions to extend the Fire Chiefs' Emergency Plan of Westchester County, N. Y., into the State of Connecticut were acted upon at the first regular meeting of the Plan since the summer interval at Peekskill, N. Y., on Wednesday, October 28, at 8:30 p.m. President D. Wiley Travis, Jr., Chief of the Peekskill Fire Department, presided.

The Secretary was instructed to send a letter to the Board of Directors of the Westchester Volunteer Firemen's Association, inviting the members to meet with the Plan at its next meeting. Captain Dawkins reported that many of the towns and villages have not responded in the matter of a questionnaire sent by him requesting information as to their fire department equipment. He required these replies in order to complete the report as regards the equipment of the Westchester Fire Departments, so that this matter can be checked up and the report be placed in the hands of the Planning Committee.

Secretary-Treasurer Riviere reported a balance in the treasury of $273, with all bills paid. He spoke of the need for extending the membership of the plan into the State of Connecticut. Chief Sullivan, of Greenwich, Conn., he said, had suggested that efforts should be made to this end, and he thought the best plan would be to form a special committee to consist of the two members from Connecticut, Chief Sullivan and Chief Veit, of Stamford, and three or four from Westchester, to consider the idea of forming a Subsidiary Chiefs' Plan to include members from the sister state. A motion was made to this effect and carried.

The chair appointed as the Committee on Extending the Plan: Chiefs Sullivan, Greenwich, Conn.; Viet, Stamford, Conn.; Brennan, Verplanck Point, N. Y.; Ex-Chief Lemmon, Mamaroneck, N. Y.; Assistant Chief McGuire, Peekskill, N. Y., and Chief Walsh, East Port Chester, Conn.

The members appointed on the Committee for Visiting Sick Members were Chiefs Steuhl, Eastchester; Outhouse, Ossining; Brennan, Pelham Manor; Barth, Elmsford, and Dawson, Dobbs Ferry.

Four Fire Commissioners of Chappaqua, N. Y., made short addresses. Secretary Riviere, at the request of the Chair, outlined the history of the Chiefs' Plan for the benefit of the new members and guests present. Among other visiting officials at the meeting were President May and Commissioner of Public Safety Moniz, of Peekskill, and Fire Commissioner Merkle, of Mount Vernon.

It was voted to meet on the evening of Wednesday, November 18, at Chappaqua, N. Y., at the invitation of Chief Roner, of the Fire Department of that village.

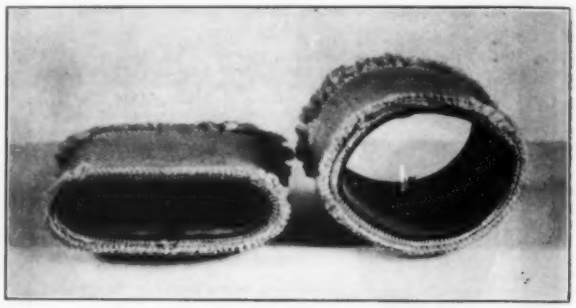
At the conclusion of the meeting David Leerberger, of Walter Kidde & Co., gave an interesting talk on Carbon Monoxide, and showed the U. S. Chamber of Commerce film on the subject. This was followed by a talk on the work of the Red Cross in giving free instruction on first aid to the injured to firemen, by Captain Yates, of the Westchester Division of the Red Cross. Votes of thanks were tendered to both gentlemen after their addresses.

The evening was concluded by a repast in the Chinese style.

New Process for Curing Fire Hose

A new process in the curing of fire hose which makes possible the production of hose which lays flat at all times except when in use, has been announced by the B. F. Goodrich Rubber Company, Akron, Ohio.

The advantages claimed for this curing process by Goodrich engineers, are longer life, greater ease in coiling, and



Comparison of the New Type Goodrich "Flat Cure" Hose With "Round Cure" Fire Hose

the use of less space in racking. Fire hose was the first product manufactured by Goodrich when the rubber company was started more than sixty years ago.

Department and Other Reports Received

Firemen's Association of Allegheny County—Official year book of the seventeenth annual convention; illustrated, with history of the Fire Department.

Tacoma, Wash.—By-Laws of the Board of Trustees of the Firemen's Relief and Pension Fund of the Tacoma Fire Department; twenty-four pages and cover.

British Columbia—Ninth annual report of the Fire Marshal for the Province of British Columbia, Canada; twenty-two pages and cover.

CONVENTION DATES

Nov. 18—FIRE CHIEFS EMERGENCY PLAN, OF WESTCHESTER COUNTY, N. Y. Regular Monthly Meeting, Fire Headquarters, Chappaqua, N. Y. Secretary-Treasurer, Lieut. E. Riviere, Fire Headquarters, Larchmont, N. Y.

Dec. 5-6—NORTHERN CALIFORNIA FIREMEN'S ASSOCIATION. Next meeting, Arbuckle, Cal. Secretary, Asst. Chief H. K. Smith, Fire Headquarters, Redding, Cal.

Jan. 23-24, 1932—SOUTHERN CALIFORNIA FIRE CHIEFS' CLUB. Next meeting, Island of Catalina, Cal. Secretary-Treasurer, Charles E. Smith, Chula Vista, Cal.

May 9-12, 1932—NATIONAL FIRE PROTECTION ASSOCIATION. 36th Annual Meeting, Atlantic City, N. J. Managing Director, Franklin H. Wentworth, 60 Batterymarch St., Boston, Mass.

May 11, 1932—DEL-MAR-VA VOLUNTEER FIREMEN'S ASSOCIATION. 3rd Annual Convention, Cape Charles, Va. Secretary, W. A. Karpa, Cape Charles, Va.

June, 1932—NORTHWESTERN OHIO VOLUNTEER FIREMEN'S ASSOCIATION, 60th Annual Convention, Gibsonburg, Ohio (exact date to be decided later). Secretary, Harry Smith, Supt., Water Works, Port Clinton, Ohio.

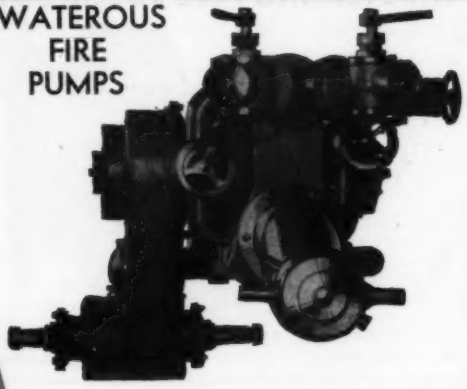
June 21-24, 1932—ILLINOIS FIRE COLLEGE, 8th Annual College, University of Illinois, Champaign-Urbana, Ill. Director, Prof. L. H. Province; Secretary, Asst. Chief Roy W. Alsip, Fire Department, Champaign, Ill.

June 21-24, 1932—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS, 10th annual convention, Newport, R. I. Secretary, John W. O'Hearn, Watertown, Mass.

Aug., 1932—VIRGINIA STATE FIREMEN'S ASSOCIATION. 46th Annual Convention, Alexandria, Va. (Exact date to be determined later.) Secretary, O. W. Dabney, Staunton, Va.

Aug. 2-4, 1932—INDIANA FIREMEN'S ASSOCIATION. 16th Annual Convention, Columbus, Ind. Secretary, Clem Smith, Post Office Box 520, Terre Haute, Ind.

WATEROUS FIRE PUMPS



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WATEROUS COMPANY
Saint Paul, Minnesota

WATEROUS dependable

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CHIMNEY FIRES ?

Chiefs who are quick to adopt better methods now use the

CENTRAL CHIMNEY FIRE FUSEE

All you do is scratch one like a match and hold it so that the burning gases go up the chimney. Simple, safe, sure.

Case of 36 ..... $18.00
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Ask your supply dealer or write us direct.

CENTRAL RAILWAY SIGNAL CO., INC.
NEWTON, MASS.

You can't fight fires with Hydrants that are broken, frozen or rusted!

MATHEWS MODERNIZED HYDRANTS

are designed so that their vital parts are protected against ice and rust; and because broken Mathews hydrants can be replaced in a few minutes without digging or breaking the pavement they never need be out of service long at a time. A broken Mathews cannot leak or cause damage by flooding. Write for the descriptive Mathews booklet.

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In business continuously since 1803
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CAST IRON PIPE AND FITTINGS
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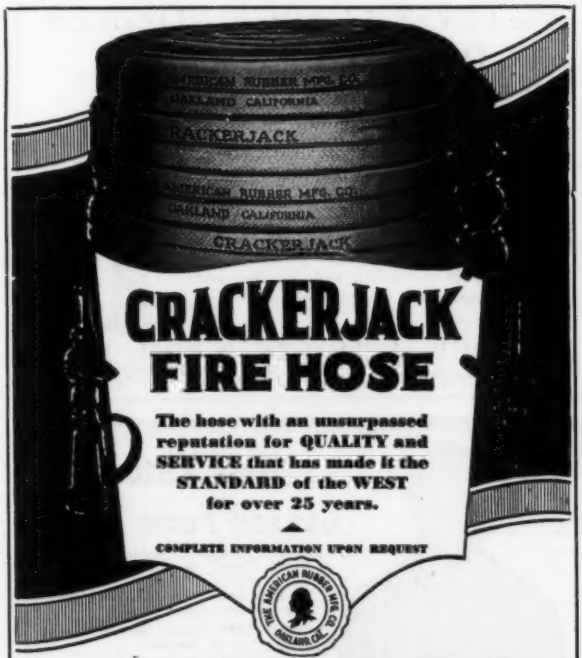
(Reg. U. S. Pat. Off.)



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The hose with an unsurpassed reputation for QUALITY and SERVICE that has made it the STANDARD of the WEST for over 25 years.

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Offers a profitable
OPPORTUNITY
for wide-awake responsible
REPRESENTATIVES
in the fire field

Communicate Now
Rich Territories Available

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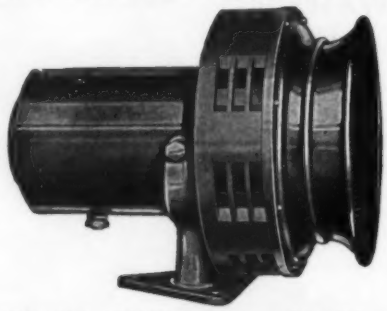
THE STERLING FREE ROLLING SIREN

GREATEST SIREN IN THE WORLD



THE STERLING SIREN FIRE ALARM CO., INC.
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ALB QUICK HITCH PANTS
and RUBBER FIRE COATS

Used by some of the largest fire departments in the country. These outfits should be standard in every worth while department. They go on in a second—last for years—and you can't beat these prices.

COATS—Size: 38 to 46.....$8.50
PANTS—Size: 32 to 42.....$6.00
(Slightly higher for larger sizes.)

Ask your dealer for ALB—he can get them for you or write direct.

ALB RUBBER COMPANY
70 Union Square Somerville, Mass.

Hedberg Super Sirens
"The World's Best by Test"

offer the world's greatest and most versatile range of choice involving sizes and methods of operation.

Write for descriptive matter showing sirens that have never lost in competition.

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The FINEST LARGE NOZZLES *and* DECK GUNS are "Made by MORSE"

Practically every well known Fire Boat in service in this country today is equipped with MORSE "Invincible" Nozzles, many pieces of fire apparatus are also equipped with these exceptionally fine nozzles. They are the result of nearly a hundred years of experience in producing nozzles that are a lot better than the general run of fire nozzles.

ANDREW J. MORSE & SON, INC.
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Quick-Acting Reliable

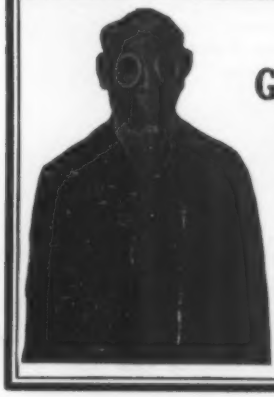
Anderson-Hale Improved

FIRE STATION DOOR OPENERS

Over 1,300 sets of Anderson-Hale Fire Station Door Openers are in successful use. They provide simple, durable, quick-acting doors that open inward. No obstruction to sidewalk. Attractive in appearance, cannot sag, closes tight, excludes cold, gives clear opening. Opens from driver's seat or from floor. Many repeat orders from users.

Write for complete information.

The Anderson Coupling & Fire Supply Co.
Mfrs. Motor Fire Equipment and Fire Supplies
Kansas City, Kansas



New Victor Gas and Fume Mask

Better Rubber. Longer Life. Better Fitted. Moulded to Fit the Face. Better Vision. Renewable Lenses. Better Air. Better Work. Low Prices. High Quality.

Over 5,000 Victor Gas Masks in Service

Full Line Fire Dept. Supplies and Equipment

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The Woodhouse Mfg. Co., Inc.
156 Chambers St., New York
D. A. Woodhouse, Pres. and Gen. Mgr. George J. Kuss, Vice-Pres. and Treas.

COMFORT AND SECURITY WITH THE

CAIRNS LATEST LOW HEAD CUSHION LINED HELMET

COMFORTABLE AS YOUR OLD FELT HAT; WON'T SHAKE OFF

Never go to a fire without the protection of a good helmet. It may save your life.

Send for your copy of Catalog No. 227, showing this latest improvement.

CAIRNS & BROTHER
72 GRAND STREET Established 1836 NEW YORK

NEW YORK CITY HAS MODEL MOTION PICTURE FILM LAW

New Ordinance Result of Conference by Best Minds in Fire Department, Underwriters and the Motion Picture Industry — Text of Law

By WM. JEROME DALY

(Continued from September 30 issue)

FOLLOWING is the sixth installment reproducing the test of the New York City ordinance intended to "put teeth" into the laws relative to inflammable motion picture film. The new law represents the composite thought of the "best minds" in the fire-fighting service, the insurance underwriters, the fire prevention field and the motion picture representatives themselves. It is the culmination of eighteen months of sincere, earnest, painstaking and technical efforts to get the safest regulations possible for both the industry and the public.

The title of the new law is as follows:

AN ORDINANCE to amend chapter 10 of the Code of Ordinances by adding a new article 20, in relation to inflammable motion picture film, and repealing the present article 20 of chapter 10, and subdivision 23 of section 1 of article 1 of chapter 10, relating to the same subject.

Be it Ordained, by the Board of Aldermen of The City of New York, as follows:

Section 1. Article 20 of chapter 10 of the Code of Ordinances is hereby repealed and a new article 20 is inserted in place thereof to read as follows:

Article 20

Sections 240 to 244 and part of Section 245 have already been published. Following is the conclusion of Section 245:

§245. Special provisions applicable to motion picture film studios.

(d) All storage of inflammable motion picture film, whether permanent or temporary, shall be in vaults or cabinets constructed as provided in this article. Except as otherwise provided for not more than 1,125 pounds, 225 standard reels, shall be stored in cabinets in the editing rooms.

(e) Vaults or cabinets for the storage of inflammable motion picture film shall be located in a section cut off from the studio floor by fire partitions constructed as specified in article 18 of chapter 5 of the Code of Ordinances.

(f) At any time not more than 2,000 feet of inflammable motion picture film exposed outside of closed containers and not more than 15,000 feet of inflammable motion picture film in closed containers shall be used by any person regularly employed in the projection, examination and/or repair rooms. Not more than 20 persons shall be regularly employed at any time in any projection, examination and/or repair rooms.

(g) In shipping Rooms, in which there are employed not more than 10 persons, there may be maintained 100,000 feet of inflammable motion picture film in closed containers, and not more than 50 reels, or 50,000 feet, of inflammable motion picture film shall be exposed outside of closed containers. Only bronze hammer heads shall be used in packing and shipping.

(h) In positive cutting rooms, in which there are employed not more than 6 persons, there may be maintained not more than 72,000 feet of inflammable motion picture film in closed containers and not more than 24,000 feet of inflammable motion picture film may be exposed outside of closed containers at any one time.

(i) In negative cutting rooms, in which there are employed not more than 8 persons, there may be maintained not more than 120 reels, or 120,000 feet of inflammable motion picture film in closed containers, and not more than 30 reels, or 30,000 feet, of inflammable motion picture film shall be exposed outside of closed containers.

(j) In experimental rooms, in which there are employed not more than 4 persons, there may be maintained not more than 90 reels, or 90,000 feet of inflammable motion picture film in closed containers, and not more than 12 reels, or 12,000 feet of inflammable motion picture film shall be exposed outside of closed containers.

(k) All storage of film except as otherwise provided shall be in vaults, provided, however, that raw stock in original cases may be stored in a special room used for no other purpose.

§246. Special provisions applicable to sound recording and motion picture titling studios.

Sound recording studios and motion picture titling studios shall comply with the following in addition to the general provisions of section 243:

1. Exits. (a) Exits shall be designated with exit signs and lights and where such exits are not plainly visible from any portion of the building which they serve, directional signs and arrows and other markings shall be painted on the walls to aid occupants toward reaching exits.

(b) No exit nor line of travel to same shall be obstructed in any way.

(c) No exit door shall be locked or fastened in any way while the studio is in operation. All doors leading directly to the street or open area in excess of those lawfully required to be maintained may be fastened by panic bolts, or other locking devices, approved by the Fire Commissioner, permitting easy opening from the interior.

2. Treatment of combustible material. (a) Materials constituting a permanent finish or interior surfacing on ceilings, permanent partitions and walls, and used to reduce the reflection or transmission of sound, shall, if not incombustible, be or treated so as to be of approved slow burning composition or character.

(b) All fabrics of monk's cloth, canvas, muslin, burlap, silk, satin, velvet, velour or similar material suspended from ceilings or hanging against walls or partitions, shall be painted, sprayed, or saturated with fire retarding or flame proofing material or otherwise rendered safe against fire to the satisfaction of the Fire Commissioner.

3. Projection booths. Motion picture projection booths in or connected with sound recording studios shall be governed by the provisions of Section 244 for screening or projection rooms.

4. Film. No inflammable motion picture film shall be kept in a sound recording studio except in the projection booth or other location approved by the Fire Commissioner.

§247. Laboratories.

Motion picture film laboratories shall comply with the following in addition to the general provisions of Section 243:

1. Construction. No laboratory shall be located in any building not of fireproof construction.

2. Quantity of film limited. (a) In all rooms in which film is handled the ratio of square feet of floor area to number of persons in such rooms shall not be less than 35 square feet per person. Not more than 15 persons shall work in one room at one time, except as hereinafter provided for.

(b) All film not actually being worked upon or going through some operation shall be kept in closed containers. The quantity of film not in closed containers, shall not exceed 3 reels per person handling film; provided, however, that this restriction shall not be applied as limiting the quantity of film which may be in process on printing, developing or drying machines.

(c) In all work rooms in which film is handled there shall not be more than 10 reels of film not in approved cabinets for each person working in such rooms; provided, however, that in developing rooms there shall not be more than 20 reels of film not in approved cabinets for each developing unit. Not over 150 reels of film shall be kept in approved cabinets in a single room. All film in excess of the above quantities shall be in vaults constructed as provided in this article. Vaults for this purpose may open directly into the work rooms and a single vault may serve two rooms by opening into each room.

(d) In positive joining and assembling or inspection rooms, in Motion Picture News Laboratories, not more than 250 reels, or 250,000 feet of film may be maintained in closed containers, of which not more than 50 reels, or 50,000 feet, may be exposed.

(e) In examining and assorting rooms there may be not more than 150 reels of film in such rooms not in cabinets.

(To be continued)

A delegation of members of the State Firemen's Association met in the office of Chief A. McC. Marsh, of Columbia, S. C., in the interest of the proposed firemen's college. A committee was appointed to go before the Board of Trustees of the University of South Carolina and ask for land on which to construct a drill tower. If the site is given, the firemen will then ask the legislature for a $2,500 appropriation for building the tower.

FALSE ALARMS

JERKED ABOUT

A new member of the force was placd on night duty. When an alarm came in, he became very much excited and put on his trousers backwards.

The fire was a tough one to fight, and during the course of operations, the new member was struck by a loose brick and knocked unconscious. He came to quickly and beheld his friend Mike looking down on him. In order to reassure his buddy that all was well, he remarked:

"Oi'm not hurt—just a little dizzy."

"Oh, yes you are hurt," said Mike. "You got a terrible twist."

Earl Carroll has presented another big success. It's the third blonde from the left.

EASILY SUITED

The Lieutenant ran into a lot of trouble that morning. It was one of those days when the Commissioners bawled out the Chief, and the greetings of the day went down the line until it had reached the lieutenant. So when he went out for lunch, he was not in the best of humor. His food did not satisfy him. He called to the waiter who in turn spoke to the boss.

"That customer," the waiter said, "says his soup is not fit for a pig."

"Take it away then," ordered the boss; "and bring him some that is."

News item: Burglar finds lady in bath—covers her with his revolver.

HELLO, SUCKER!

"Mommer, what becomes of an old automobile when it gets too old to run any more?" asked the little boy.

"Your father is Fire Commissioner, ain't he? Well, the owner of the car gets in touch with your father and suggests that the firemen chip in and buy it for the Fire Chief."

"I'm a helluva good fighter, but my feet don't like to stand around and see my body abused!"

FAIR PLAY

News Item: "Engine 3 of the Revere Fire Department extinguished a fire last night on Engine 3 of the Revere Fire Department in which two firemen were seriously burned."

"Your fare," said the conductor and the shy young thing blushed.

GREATLY ADMIRED

A wealthy man, who was very much of a fire buff, delighted to spend most of the evenings in the fire house and to chat with the boys. He was very proud of the fortune that he had accumulated.

He explained, "Fellows, I'm a self-made man."

One of the wits in the house answered, "Gee, that's what I admire about you. You always take the blame for everything."

What good is alimony on a cold night?

SAFETY FIRST

Wilson moved into his new home, and in honor of the event, he invited the boys of the off-platoon up to his house to make merry. And the boys did. They draped themselves around every soft chair in the house.

"Help yourself to the cigars," said the host genially. "They are some my wife gave me for my birthday."

Man after man vowed he had sworn off smoking.

When the guests had departed his wife asked:

"What made you tell such a lie. It was a pair of slippers I gave you for a present."

"Yes, my dear, but I couldn't afford to give all those cigars away when I had spent good money for them."

Some girls smoke. That is their substitute for thought.

LEAD LINED

Up at the house they tell the story about Mike who had been a hard drinker for years. The men were busy recharging soda and acid extinguishers and then what appeared to be a terrible accident happened. By mistake Mike drank the sulphuric acid.

A few days later a friend asked about Mike.

"Oh he's all right. He said the only thing he noticed was that he made holes in his handkerchief every time he blew his nose."

FIRE PREVENTION

A group of four convicts gathered in the prison yard and each told what he was in for. One had killed a man, the second had put another man's name to a check while the third one had gone in for a plurality of spouses. The fourth man who appeared to be very well educated and was called the "parson," did not seem inclined to talk.

"Come, parson, what brought you here?"

"I don't care to say," said he.

"Out with it. Shoot anybody?" asked one.

"No, I didn't shoot anyone, but since you would like to know, I got 'time' because I didn't build a fire station."

The others looked at him in amazement.

"Well, you see the community collected $16,000 and gave it to me as Secretary of the company. And I didn't build the station. That's all."

And it's a wonder nobody has thought of using an outboard motor in a jazz band.

He flipped his cigarette into the air
And it landed—he cared not where.
He went home and slept but when he awoke
He had burned up his job, and he was broke.

PSST! JOE! WHEN DID THE CHIEF HAVE HIS APPENDIX OUT?
QUESTIONS
1. EXPLAIN BRIEFLY THE DIFFERENT FIRE DEPARTMENT OPERATIONS

—Drawing by "Art" Espey

A Too Literal Interpretation

YOUR CATALOG PAGE

Fire Protection Equipment and Supplies

1 Acid Siphons.
2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
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9 Alarms, Thermostatic.
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12 Banners, Trumpets, etc.
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18 Brakes, Air.
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20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid Fire Apparatus.
24 Chassis for Fire Apparatus.
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26 Chimney Fire Fusees & Compounds
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31 Cutting & Welding Equipment, Electric.
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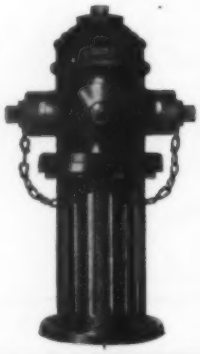

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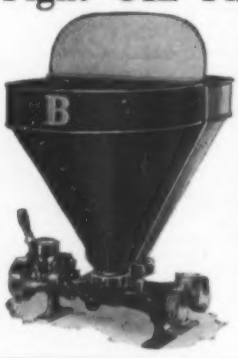

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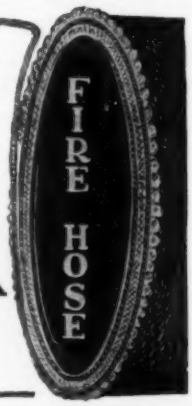

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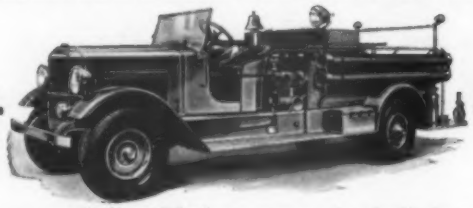

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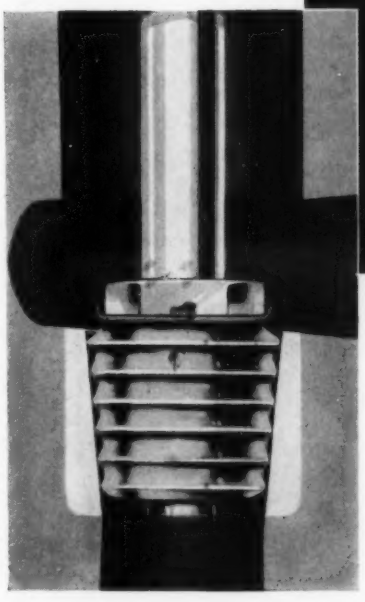

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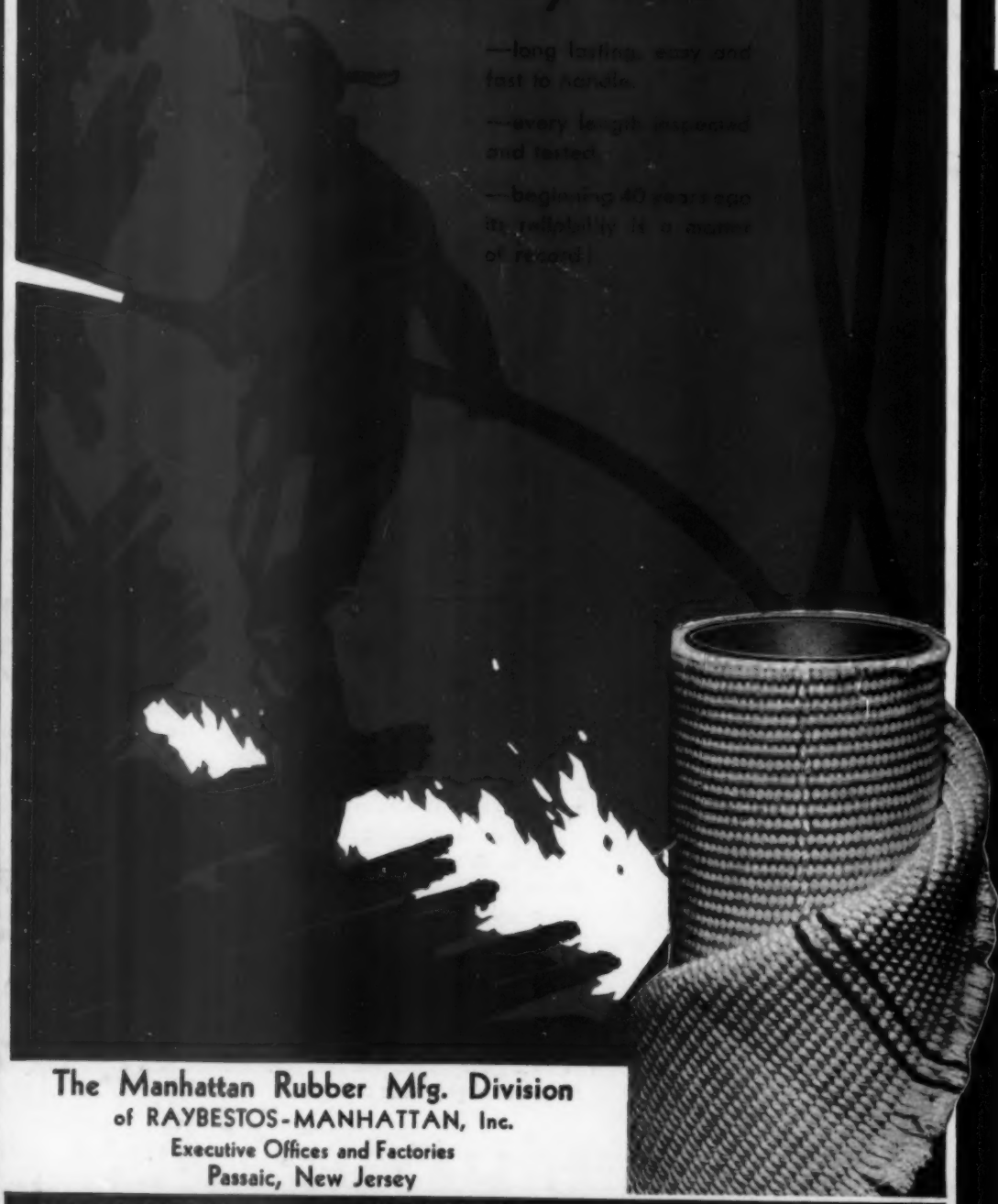

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